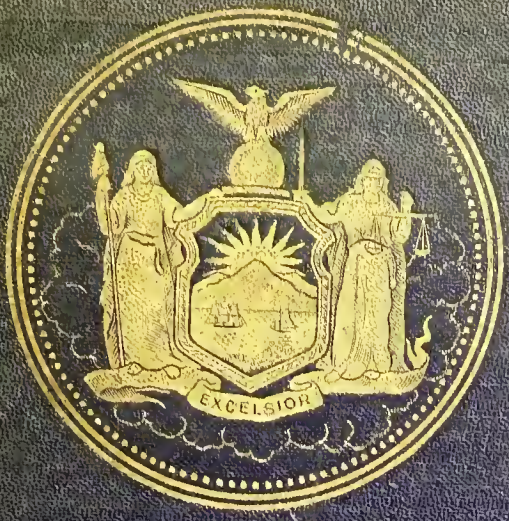


# New York at the World's Columbian Exposition

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The Board of General Managers

of the

Exhibit of the State of New York,

at the

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CAPT. JOHN E. HETHERINGTON.

ROSWELL P. FLOWER, Governor of the State of New York

# REPORT

OF THE

# BOARD OF GENERAL MANAGERS

OF THE

# EXHIBIT OF THE STATE OF NEW YORK

AT THE

# WORLD'S COLUMBIAN EXPOSITION.

TRANSMITTED TO THE LEGISLATURE APRIL 18, 1894.

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# STATE OF NEW YORK.

No. 86.

# IN SENATE,

APRIL 18, 1894.

## REPORT

OF THE

## BOARD OF GENERAL MANAGERS OF THE EXHIBIT OF THE STATE OF NEW YORK AT THE WORLD'S COLUMBIAN EXPOSITION.

ALBANY, N. Y., *April* 18, 1894.

To the Hon. ROSWELL P. FLOWER,
*Governor of the State of New York:*

SIR.— Pursuant to chapter 236, Laws of 1892, the Board of General Managers of the Exhibit of the State of New York at the World's Columbian Exposition have the honor to submit to you the following report.

CHAUNCEY M. DEPEW,
JOHN BOYD THACHER,
GORTON W. ALLEN,
LOUIS MEREDITH HOWLAND,
WALTER L. SESSIONS,
CHARLES A. SWEET,
*General Managers.*

JOHN FOLEY,
*Chief Executive Officer.*

# REPORT.

The Columbian Exposition of 1893 has gone into history pre-eminent in architecture as the greatest creation the world has ever seen; in commerce as the mightiest aggregation of the products of the brain and hand of man; in education as an opportunity unparalleled for a liberal culture in arts and science.

New York's part in this grand production was a proud one. The genius of her sons was early called into activity for the creative work, and the wisdom of the choice was manifest in every part of the grounds. The Administration Building, the crowning glory of that wonderful architectural composition, was the work of Richard M. Hunt. The hall of Manufactures and Liberal Arts, which covered the largest area of any structure ever built, was the work of George B. Post. The Agricultural Building, with all its faultless symmetry of outline, was designed by McKim, Mead & White. The Palace of Fine Arts, whose classic restfulness and beauty was part of the artistic education of the fair, was the work of Charles B. Atwood, as was also the Peristyle, so fitly completing the lakeward side of the Court of Honor.

Nor need we confine our list to the buildings alone. New York's veteran chief, Frederick Law Olmsted, supervised the landscape gardening which formed the incomparable setting for the architectural gems, while the delicate task of decorating buildings and grounds in harmony with the structural design was intrusted to Frank D. Millet.

In the presentation of her material wealth and resources New York was equally prominent. There was not one of the thirteen departments in which her exhibits were not a credit and an honor to her people, and in four departments, horticulture, manufactures, fine arts and liberal arts, she easily distanced her domestic competitors and rivaled as a sister empire the exhibit of any foreign state.

In the preparation of this report New York's share in the exposition is traced fully from its first beginnings, both as a matter of justice to her unequaled record and of historical value for future use.

## SELECTION OF SITE.

New York city was one of the first municipalities to take preliminary action to secure the fair. On July 17, 1889, Mayor Hugh J. Grant, upon the request of fifty leading firms and corporations, issued invitations to 300 prominent citizens, requesting their attendance at a meeting to determine the popular sentiment of the city, as to the advisability of holding an exposition to commemorate the 400th anniversary of the discovery of the new world by Columbus, and the availability of New York as a proper site for such an exposition. In answer to his call the City Hall was crowded on July 25, 1889, with prominent business and professional men. An organization committee of 100 was formed, divided into four sub-committees of twenty-five each on finance, legislation, site and buildings and permanent organization.

The work of the committee until Congress met consisted in bringing the public mind to a receptive state, planning adequate accommodations and raising a large subscription fund.

After the holiday recess Congress turned its attention to the World's Fair bill. Four cities put forth serious claims: St. Louis, Chicago, New York and Washington. The first was at no time a dangerous rival; the last based its hopes on a possible deadlock, which would result in its selection as a compromise. The struggle was between New York and Chicago. The advantages, claims and counterclaims of both cities were furiously argued through the press and in the legislative halls. On January 11, 1890, the special committee of the House of Representatives gave a hearing to the New York and Chicago delegations. St. Louis had been heard on the ninth and Washington on the tenth. For New York, Chauncey M. Depew, Bourke Cockran and Warner Miller made convincing and eloquent arguments; for Chicago, De Witt Cregier, Thomas B. Bryan and E. T. Jeffrey were able advocates. The partisans of both cities were encouraged, but it was felt that in the end that city would win the prize which could best demonstrate its ability to raise the amount of money necessary to assure a success commensurate with the dignity of the event. With this end in view, the New York organization committee drafted a bill and submitted it to the State Legislature January 24, 1890, authorizing New York city to raise $10,000,000 to meet the expenses of the fair. This sum added to the subscription fund which already exceeded $5,000,000, made the magnificent total of $15,000,000 to be offered by New York

CHAUNCEY M. DEPEW, President Board of General Managers

as a guaranty of her earnestness and ability. Even the staunchest supporter of Chicago admitted that, should the New York delegation make this pledge before the congressional committee, nothing could prevent the selection of New York as the site.

On Tuesday, the twenty-eighth, the New York Assembly passed the organization committee's bill; on the twenty-ninth the Senate also passed the bill, amending it, however, by adding twenty-two names to the list of 104 incorporators contained in the original bill. This was done to insure a more equal division of the committee politically, and was the first appearance of politics in the project from its very beginning. The Assembly refused to concur in the amendment, and a deadlock was precipitated. It would be quite fruitless to record the proceedings of the next three weeks. Conferences, committee meetings, hearings and appeals followed one another in rapid succession, but no sentiment could seem to rise paramount to partisan politics.

In the meantime, New York's congressional delegation, under the leadership of Governor Roswell P. Flower, then representing the twelfth district, James J. Belden, of Syracuse, and Charles Tracey, of Albany, were doing yeomen's work. By their united efforts they had succeeded in confining the debate to the subject-matter of the bill alone, leaving the place to be filled in afterward. The balloting on the latter question was fixed for February 24, 1890.

On February seventeenth a meeting of the New York organization committee, supplemented by hundreds of promoters of the fair, was held at Cooper Union. On motion of Chauncey M. Depew, a compromise measure was unanimously recommended to the State Legislature. It provided that the names of the 104 incorporators should remain as in the first draft of the bill, but that the consent of two-thirds of the members should be necessary to pass any measure of importance. The compromise was acceptable to the Legislature, and on February twentieth the bill, with this proviso, was passed. But, as the sequel proved, the action came too late. Its moral effect was entirely dissipated by the thirty days' struggle, which was seized upon by the opponents of New York as proof positive that a lack of unanimity and harmony on the subject existed in New York. It is not within the scope of this report to attempt to fix the responsibility for the failure.

During the three days before the balloting Congress was besieged by a host of New York workers, but nothing could prevail against the skillful, well-planned and energetic canvass which had been carried on

by the Chicago delegation for a month. On the first ballot the vote stood: Chicago, 115; New York, 70; St. Louis, 61; Washington, 58. On the eighth and final ballot Chicago received 157; New York, 107; St. Louis, 25; Washington, 18; necessary to a choice, 154.

The bill was rapidly pushed through the House and Senate, and, on April 28, 1890, was signed by President Harrison. In accordance with the provisions of the bill, on the nomination of Governor David B. Hill, the President appointed Chauncey M. Depew, of New York, and John Boyd Thacher, of Albany, National Commissioners, with James Roosevelt and James H. Breslin, of New York, as alternates. Gorton W. Allen, of Auburn, was appointed one of the commissioners at large, with General Louis Fitzgerald, of New York, as alternate. Mr. Allen served as fourth vice-president of the World's Columbian Commission, and Mr. Thacher as chairman of the Executive Committee on Awards.

### BANQUET GIVEN BY NEW YORK'S NATIONAL COMMISSIONERS.

For eighteen months nothing of consequence was done towards securing a proper representation at the fair of New York's industries. Two bills were introduced in the Legislature of 1891 by Senator Lispenard Stewart, creating a board of commissioners, and making an appropriation for the presentation of the State's interests at the fair; but the first was allowed to die, and the second, after being favorably reported from committee, was never pushed to a third reading. This apathy indicated no indifference to the success of the fair, for, with one or two exceptions, the press of the State was in its favor, while the sentiment of the people was pronounced in its good will. The delay arose rather from Congress' fixing the date of opening for May 1, 1893, one year later than the actual anniversary, thus giving the impression of much more time, and principally from an inadequate idea of the amount of work actually necessary to arouse exhibitors and prepare for a complete exposition of the State's resources.

In this emergency, the complimentary dinner given in New York at Delmonico's, December 21, 1891, by the National Commissioners for New York, Messrs. Depew, Allen and Thacher, did much to set right the attitude of the State in the eyes of the nation. It was given at their own expense, and, as expressed by the invitations, "to consider New York's duty and interest as they are related to the World's Columbian Exposition to be held in Chicago, May, 1893." Over 100 guests were

present. The design and motto of the menu card were typical of the occasion: "East and West joined with heart and hand." No more representative gathering could well be imagined, and every great interest in New York was there in the person of one or more of its leading men. From Chicago were T. W Palmer, President of the World's Columbian Commission; W. T. Baker, President World's Columbian Exposition; George R. Davis, Director-General, and Moses P. Handy, Chief Department of Publicity and Promotion.

Mr. Depew led the after-dinner speaking by setting forth the reasons which had called them together, the unfortunate political claims which had entered into the councils of the State, the glorious destiny of the exhibition, the necessity for unanimous action, and closed with an eloquent peroration on the growth of the West and the benefits consequent upon the exposition.

Mr. Depew said:

GENTLEMEN.— The New York Commissioners are glad to welcome you here to-night. The National Commission for the creation and promotion of the World's Fair, or Columbian Exposition, consists of two members from each State and eight commissioners at large, with their alternates. The New York members, Mr. Thacher, Mr. Allen and myself, have invited you to meet us, not on account of the general interests of the exposition, for its success as a whole is assured, but we wish to consult with you as to the proper provision which should be made for such a representation of our State at the exposition as would be worthy of its position among our sister Commonwealths. Unfortunately, with us the question has been obscured by political claims and considerations which have not entered into the councils of other States, and which have no place, legitimately or illegitimately, in the consideration of the duties which devolve upon us. This exposition is destined to be not only the most phenomenal presentation of the industries, the arts, the sciences, the education, and the civilization of this and other countries, but its character is in all respects purely national.

The success of the Columbian Exposition must not be impaired or retarded by local ambitions or jealousies anywhere. So far as New York is concerned it has none; it has not acted in this matter before because the time had not yet arrived. It is now prepared to do its part in its own imperial way. Whenever a new State is organized there is always fierce competition among rival cities for the position of capital of the Commonwealth. When the selection is made controversy is forgotten and the fortunate place becomes thereafter the center of the official and legislative

life of the State. New York was the first capital of the United States and continued so for many years.

The South and the West fiercely contended for a change, and of course as the result of the controversy New York lost. Nevertheless it still remains the first city of the continent and the center of its enterprise and financial strength. Its size and grandeur always have and always will unite all places to dispose of it as the most dangerous competitor before indulging in their own rivalries. But since Washington became the capital, New York has been proud to be represented there by its ablest statesmen and to do its part to promote the glory and grandeur of the republic. The great West, beyond the Alleghenies, which had made such marvelous growth in the last half century in population and agricultural and industrial wealth, demanded and received the World's Fair for Chicago, which city is in itself the most phenomenal exhibit of American enterprise, energy and civilization. Whether the exhibition had been at New York, Chicago, St. Louis or San Francisco, it would have been, as it is now, the plain duty of each State to do its best to promote an enterprise which means so much for the industrial, agricultural and educational interests of our country. The Centennial Exhibition of 1876 was a worthy celebration of the completion of the first one hundred years of our independence. The country was still staggering under the bankruptcy of the fearful panic of 1873, but the exhibition placed our business upon its feet and infused life and health into our credit. It distributed to the remotest corners of our country that instruction which materialized into new sources of employment and development and brought into circulation $100,000,000 which otherwise would have lain dormant or idle.

The exhibition two years ago at Paris saved the French republic from political destruction by turning the commercial distress which was prevalent throughout France into happy and prosperous times. Three hundred millions of dollars or more was in that instance released from savings banks and stockings or brought in from other nations to swell the tide of French profit and progress.

Our Columbian Exposition comes at a most opportune time. The unprecedented crop which our fields have produced this year and the equally unprecedented demand for our food products abroad will give us for twelve months an exhilarating period of prosperity. Farm mortgages will be paid off, new enterprises will be started, old railroads will be extended, and new ones will be constructed, values will rise in market price, everybody will be richer and in accord with the temper and spirit of our people, credit will be strained to the utmost to realize the largest returns from these phenomenal commercial opportunities. In the ordinary

JOHN BOYD THACHER, Board of General Managers

course of financial experience overtrading and overconfidence, with probably different relations another year between the farm and the markets of the world, would be followed by a corresponding collapse. But this great industrial exhibition at Chicago will take up the frayed threads of opportunity too lavishly employed and weave them into new cables to draw the car of American progress. The vast movement of peoples over railways, the stimulus given to business at cities and railway centers, the hundreds of millions of dollars brought into active use which would otherwise be unemployed will save us as a nation from the dangers which threaten and crystallize into permanency thousands of enterprises which otherwise would fail from lack of confidence or capital.

The citizens of Chicago are to be complimented and congratulated upon the courage and forethought which have characterized their local preparations for this grand event. They have already expended $10,000,000 of their own money, and their patriotism and resources are not yet exhausted.

But the expense of this national enterprise should not be wholly borne by the locality where Congress has placed it. The nation should do its part to second the efforts of the citizens of Chicago to make this World's Fair surpass in every respect any ever yet held in any country. The grounds devoted to the fair are more than three times greater in area than the acres which the exhibition had at Paris in 1889. The buildings are more numerous and much larger than the ones which astonished the visitors at the French capital. The floor space in these magnificent structures will be five times greater than at the Centennial exhibit at Philadelphia and double that of the French exhibition at Paris.

The cost of the preparations for the Centennial was about $5,000,000, and of the French exhibit about $10,000,000. But for the exposition at Chicago it will be $17,000,000. The buildings themselves will be an industrial exhibition of the highest character. They were designed by the most distinguished of American architects. In proportion and grandeur they excel the famed structures of other lands. By modern invention and the plastic art the architect is enabled to impress upon the eye all the effects produced by the genius of Phidias and Praxiteles.

Our exposition will be unique and distinct from its predecessors at London, Paris, Vienna, Berlin, in its superb recognition of woman and her work. A structure equal in size and appointments to any except the Machinery Hall at Paris, and designed by an American girl, will demonstrate by its architectural beauty the advance of women in this field, and the departments housed in this superb structure, where woman's work will be displayed, will fitly show what the United States has done to dignify

and ennoble womanhood and give her opportunity to make her way in the arts and industries.

At the Centennial Exhibition at Philadelphia Morse's telegraph comprised almost the sum of our knowledge of electricity, but a building at Chicago twice as large as Cooper Institute, devoted entirely to electrical appliances and inventions, will demonstrate by the advance in one department the enormous progress of the country in every department since then.

At the time of the Centennial Exposition we had 45,000,000 of people, now our numbers reach the grand total of 64,000,000. Then we had thirty-seven States, but we have since added seven stars to our flag. Then the products of our farms in cereals was about $2,200,000,000, now it is over $4,000,000,000. Then the output of our factories was about $5,000,000,000, now it is over $7,000,000,000. Such progress, such development, such advance, such accumulation of wealth, and the opportunities for wealth — wealth in the broad sense which opens new avenues for employment and fresh chances for independence and for homes — have characterized no other similar period of recorded time.

It is an insult to the intelligence of our State to ask what should be the place of New York in this grand exhibition. First in population, in manufactures, and almost in agriculture, first in all the elements which constitute a great and growing Commonwealth, its place in the emulous and friendly rivalry of sister States in this grand exhibition should be that which nature and the enterprise of its people have given it.

Our markets are west, our competitors are west. We must remove any prejudice that may exist against our trade and then command the markets by the superiority and cheapness of our product. The opportunity is before us to suffer great loss or gain incalculable advantage. But aside from material considerations New York has never failed, when patriotic effort was demanded, to respond with volume and enthusiasm which sustained its imperial position. In the presence of this representative body, speaking for them and through them for the people of the Commonwealth, I can say to the country east and west and north and south:

"New York will be at the Columbian Exposition, and it will be there in the full grandeur of its strength and development."

The Columbian World's Exposition will be international, because it will hospitably welcome and entertain the people and the products of every nation in the world. It will give to them the fullest opportunity to teach us and learn from us, and to open new avenues of trade with our markets and discover materials which will be valuable in theirs. But its

creation, its magnitude, its location, its architecture, and its striking and enduring features will be American. The city in which it is held, taking rank among the first cities in the world after an existence of only fifty years, is American. The great inland fresh water sea whose waves will dash against the shores of Jackson Park is American. The prairie extending westward with its thousands of square miles of land, a half century ago a wilderness but to-day gridironed with railroads, spanned with webs of electric wires, rich in prosperous farms, growing villages, ambitious cities, and an energetic, educated and progressive people, is purely American.

The Centennial Exhibition of 1876 celebrated the first one hundred years of the independence of the republic of the United States. The Columbian Exposition celebrates the discovery of a continent which has become the home of peoples of every race, the refuge of those persecuted on account of their devotion to civil and religious liberty, and the revolutionary factor in the affairs of the earth, a discovery which has accomplished more for humanity in its material, its intellectual, and its spiritual aspects than all other events since the advent of Christ.

Introduced by Mr. Depew, Hon. John Boyd Thacher spoke as follows:

Our nation is charged with the celebration of the Columbian discovery because we have best enjoyed its heritage. That discovery was meant for mankind. Two events first catch our eye in the 400 years of authentic history made in the New World. The one is the planting of the cross on Watlings Island in 1492. The other is the planting of the standard of American liberty in Philadelphia in 1776. The two events were remote from each other in time and distant in scene. The actors were of different blood. The first not only made the second possible but determined its action.

It is with the chief actor in the first event that we have to do just now. What manner of man is this our Columbus? We have of him four and forty distinct portraits. Each is a type. No two of these resemble each other. He is in mail and in silken hose; he is mild and he is fierce; he is freckled like a country lad, and he is bearded like the pard; he has the bewildered look of one who never had a compass, and he has the eye through which alone destiny looks. You and I can draw him as we like. If your Columbus is only a searcher after shining gold he is a splendid wretch. If your Columbus is only a capturer of harmless heathens to drag them after the car of religion he is a pious trifler. A man is no better than he makes his heroes. The God who makes men

and who uses men never intrusted a great purpose to a mean soul. The bearer may not fully know the weighty business on which he goes, but something of its meaning shines upon him and from his tempered visage enforces homage. The lonely Genoese pacing the deck of his caravel, watching for land, and no land from day to day, must have had glimpses of the new hemisphere and visions of its destiny. And so your Christopher Columbus and mine is, as his name implies, the anointed bearer of a blessing for mankind, a preparer and an opener of a new world in which man should be free from his brother, true to himself and obedient to his Maker. It is such a man about whose statue we are to walk at this exposition. It is the tree of his planting which we are to consider as we eat of its fruits. No section, no state, no Chicago can hug this blessing to its single bosom. It is for us all. Let all the people participate in its enjoyment.

We do not deny our disappointment when the World's Fair winged a westward flight. We know that if the unities had been consulted neither New York nor Chicago would have been selected, but the celebration of the great discoverer would have been beneath southern skies and where the ocean sea washes the true Guanhani. We claimed the celebration in New York because we were the supreme city of the western hemisphere. We have lost the fair, but our city has relinquished none of her supremacy. It will be mock humility now if we offer to tear down our huts to build Chicago's palace. Rather let us rejoice that we are great and strong, and that out of our fullness we may aid our sister city of the West. Chicago deserves our support. She has won our admiration. To raise $10,000,000 of money for a sentimental purpose is a task which any metropolis might approach with hesitation. Chicago has accomplished this in a few short weeks. Our blood runs faster as we recognize this magnificent courage, and we would share in her labor that we may justly share in her glory. Nothing pertaining to humanity is foreign to the true man. Nothing pertaining to our country is foreign to the true American. We are one people, one family. When prosperity spreads her sheltering wings in the East the West is safe and happy. When in the West the fields of grain stretch far and wide we in the East eat bread without scarceness.

Chicago does not come to us with an offertory basket in her hand. She comes bringing to us a flag with the colors of the World's Columbian Exposition upon its bright folds. She asks us to wave it in token of friendship and a common interest. Let the noble contention between us be from this hour which hand shall bear this flag furthest in the march of triumph and which voice shall loudest proclaim its glory.

GORTON W. ALLEN, Board of General Managers

Commissioner-at-Large Gorton W. Allen spoke as follows:

That the World's Columbian Exposition is to be an unparalleled success may as well be regarded as assured. Not, indeed, because the commissioners and the local directory are of themselves able to achieve so desirable a result by their combined wisdom and enterprise, stimulated by a degree of enthusiasm that repels all thought or apprehension of failure, but rather because the World's Fair Exposition is the formulated expression of the universal wish of the American people. It goes without saying that that universal wish is, when formulated, a specific against any tendency in the direction of failure. True, we admit the word failure in our dictionaries, but it is most commonly employed as one of the extremes in human endeavor from which we measure upwards, to actually discover the distance between achievement and failure. The enterprise is not seeking friends, for the obvious reason that it has no enemies — at home or in foreign lands.

If there has been in the past any suspicion or doubt as to the loyal and liberal spirit of the Empire State and its chief city in any and every way and manner to the end that the exposition shall be crowned with success there is none now. Much as our people would have been delighted had the generous offer of the metropolis been accepted, the failure to secure the location has never for an instant provoked or suggested the slightest feeling of retaliation, jealousy or envy. On the contrary, our people would be more likely to contribute more generously lest their failure to fulfill the largest expectation of Chicago should be attributed to disappointment.

Do you ask me what New York contemplates doing in aid of the exposition? I reply that she will occupy a conspicuous place upon the site chosen, and will undoubtedly construct a building quite commensurate to the necessities of its citizens who propose to patronize the exposition as exhibitors and visitors. Its capacity will be ample; its architectural finish will be in harmony with and not inferior to the buildings of any other State. I assure you whatever is necessary for New York to do to accommodate her people will, I have no doubt, be done, and done as promptly as the Governor and the Legislature can be duly advised by competent authority of what is needed.

And now, addressing myself more especially to the citizens of New York, it appears to me that his excellency Gov. Flower should be requested, by enactment of our Legislature, to appoint a commission, consisting of such number as shall be deemed adequate, to visit the city of Chicago, and, in connection with the World's Fair Commissioners from this State, ascertain the needs of New York State exhibitors and visitors, and with

all needful information report to the Governor with the recommendation as to the amount of appropriation deemed necessary to provide for the needs of the people, and to suitably represent the character and greatness of this the greatest State of the Union. In that way the Governor and Legislature can be promptly and adequately advised, and be able intelligently to provide appropriate legislation. Legislative provision for New York's exhibitors and visitors without such information would in all probability result in grievous disappointment. So much for New York State.

More important than any other purely financial question is that which relates to aid from the general government to the Columbian Exposition. My views upon the subject are very decided, after much reflection.

That the exposition is in need of and must have financial aid, and that with reasonable promptness, is quite beyond the realm of controversy or question. I venture to assume that the general government will give heed to the necessity of the case and grant the required aid in some form.

But in what form? That an adequate loan of any required amount can be secured from the government by the pledges of the revenue of the exposition, derived from the admission of visitors, for the payment of the debt, at such time and manner and under such regulations as may be determined upon, is feasible, and without doubt can be accomplished.

It can be easily demonstrated that such security would be ample to indemnify the government against loss or hazard, and if so it may be safely assumed that such aid would be easily within reach.

It has been suggested by some, and by others urged, that the government should be requested to make an appropriation of the public money in aid of the exposition; a gift as distinguished from a loan. This proposition, I am assured, will meet with decided opposition, and justly so in my judgment. Many reasons will be urged against this method of relief, but of them all I refer to but one, and that will be held sufficient.

It has not passed out of the memory of the general public that when the question of locating the place for the World's Columbian Exposition was before Congress, New York State was a vigorous bidder for the contested honor and prize, and she came with an indemnity backed by her millionaires, unquestioned and unquestionable, undertaking to assume all financial burdens and responsibilities, and to preserve the general government harmless in any emergency. Who doubts for a moment that that undertaking would have been faithfully kept? Who doubts that the city and State of New York would have, with prodigal hand, made ample provision for all exhibitors, foreign and domestic, out of their own purse?

No one then doubted that Chicago meant what she proposed. No one doubted but the promoters of the Chicago interest were able, and

intended at all hazards to keep the faith then pledged. Who believes now that Chicago would have been successful in that memorable yet friendly struggle, if there had been a suspicion of her ability to perform what she undertook?

Were I a resident of Chicago I would repel any propositions for aid from the general government, except in the form of a loan, secured as I have before outlined. Her fair name should not be compromised, nor her wealth and greatness belittled by the failure to keep her promise, which won for her the prestige and honor of being the city chosen by the authority of general government as the fittest and best equipped for entertaining the nation's guests while attending the greatest exposition of the achievements in the world's industries of the nineteenth century. Whatever else may be done to secure financial aid and relief let not this be done.

Other speeches were made by Messrs. Palmer, Baker, Davis, Charles S. Smith, president of the New York Chamber of Commerce, and J. Seaver Page, to whose judicious management the success of the banquet was largely due. The moral effect of this well-organized movement was felt not only at Albany when the Legislature met, but throughout the country. The East and the West, in spite of false rumors, were united in the final preparations to make this great industrial enterprise national in its character; its failure, if such could be admitted, to rest on all alike; its glory to be shared by all Americans.

## THE WORLD'S FAIR BILL.

As soon as the New York Legislature of 1892 was organized a bill was introduced providing ways and means for New York's part in the fair. It met with no opposition, and the only controversy was over the amount of the appropriation. The general opinion was that $500,000 was none too much, but $300,000 was the amount finally fixed upon as sufficient to conduct the preliminary work for a year. The following is the full text of the bill:

### CHAPTER 236.

AN ACT in relation to the exhibit of the State of New York at the World's Columbian Exposition, and to provide for the commemoration of the 400th anniversary of the discovery of America.

Approved by the Governor April 6, 1892. Passed, three-fifths being present.

*The People of the State of New York, represented in Senate and Assembly, do enact as follows:*

SECTION 1. Chauncey M. Depew, John Boyd Thacher, Gorton W. Allen, heretofore appointed by the President of the United States members of the World's Columbian Commission, and three other persons to be appointed by the Governor of the State in writing filed in the office of the Secretary of State, are hereby constituted the general managers of the exhibit of the State of New York at the World's Columbian Exposition, to be held at Chicago under the provisions of an act of Congress approved April 25, 1890, entitled "An act to provide for celebrating the 400th anniversary of the discovery of America by Christopher Columbus, by holding an international exhibition of arts, industries, manufactures and the products of the soil, mine and sea, in the city of Chicago, State of Illinois." The exhibit of the State of New York at such exposition shall not be opened to the public on Sunday, and the general managers herein provided for shall take such steps as may be necessary to carry this provision into effect.

§ 2. The Governor shall forthwith appoint a board of district commissioners for each judicial district of the State, consisting of three persons, each of whom shall be a resident of the district and, so far as practicable, representative of some of the industries of the State. Such district board shall, under the direction and subject to the control and supervision of the general managers, perform such service and discharge such duties as may be prescribed or imposed by the general managers, for the purpose of securing a full and complete exhibit of the resources, products and general development of the State within their respective districts.

LOUIS MEREDITH HOWLAND, Board of General Managers

§ 3. The Governor shall forthwith appoint some suitable and competent person who is a resident of the State, to be secretary and another to be chief executive officer of the board of general managers of the State, who shall be removable at the pleasure of the Governor. They shall each receive such annual salary as shall be fixed by the Governor, not exceeding $3,000 for the secretary, or $5,000 for the chief executive officer. Such salaries shall not be paid for more than two years. They shall be subject to the direction of the general managers of the State, and perform such duties as they shall prescribe. The said chief executive officer shall sit as a member of the said board, but not authorized to vote except in case of a tie when he shall have the casting vote.

§ 4. The general managers of the State shall, immediately after their appointment, and upon the call of the Governor, meet at the Capitol in the city of Albany and organize as a board by the election of a president and a vice-president. Three members of the board shall be a quorum for the transaction of business. The board may make rules and regulations for its government and for the government of the district boards and of the chief executive officer. But such rules and regulations shall not conflict with the provisions of the act of Congress hereinbefore referred to, or the regulations adopted thereunder, or with the rules and regulations adopted by the World's Columbian Commission. The Superintendent of Public Buildings shall provide the board of general managers with suitable furnished rooms for their use as such board in the Capitol. The board of general managers shall appoint a board of women managers of such number, and to perform such duties as may be prescribed by the board of general managers. The members of all boards appointed under this act shall serve without compensation, but their actual, necessary expenses, while in the actual discharge of their duties, shall be allowed and paid to them out of any sums appropriated therefor, upon the audit of the Comptroller. No member of any such board, nor such executive officer, shall be personally liable for any debt or obligation created or incurred by him as such commissioner, or such officer, or by such board, or any officer thereof.

§ 5. The board of general managers shall make a report of its proceedings from time to time to the Governor, and at any time, upon his written request, shall make such a report, to be by him transmitted to the Legislature, with such suggestions as he may deem important, for a complete and creditable representation of the State at such exposition. Immediately after the formal opening of the exposition an account of all expenditures made and debts incurred, showing the items, the amounts thereof, to whom paid or with whom contracted, and for what purpose, certified

by the president of the board of general managers and by the chief executive officer to be correct, shall be prepared and filed in the office of the Comptroller of the State. The board of general managers shall have power to expend such sum or sums for the transportation and care of dairy products as in their judgment may be deemed necessary to secure a creditable exhibit of said products at the World's Fair.

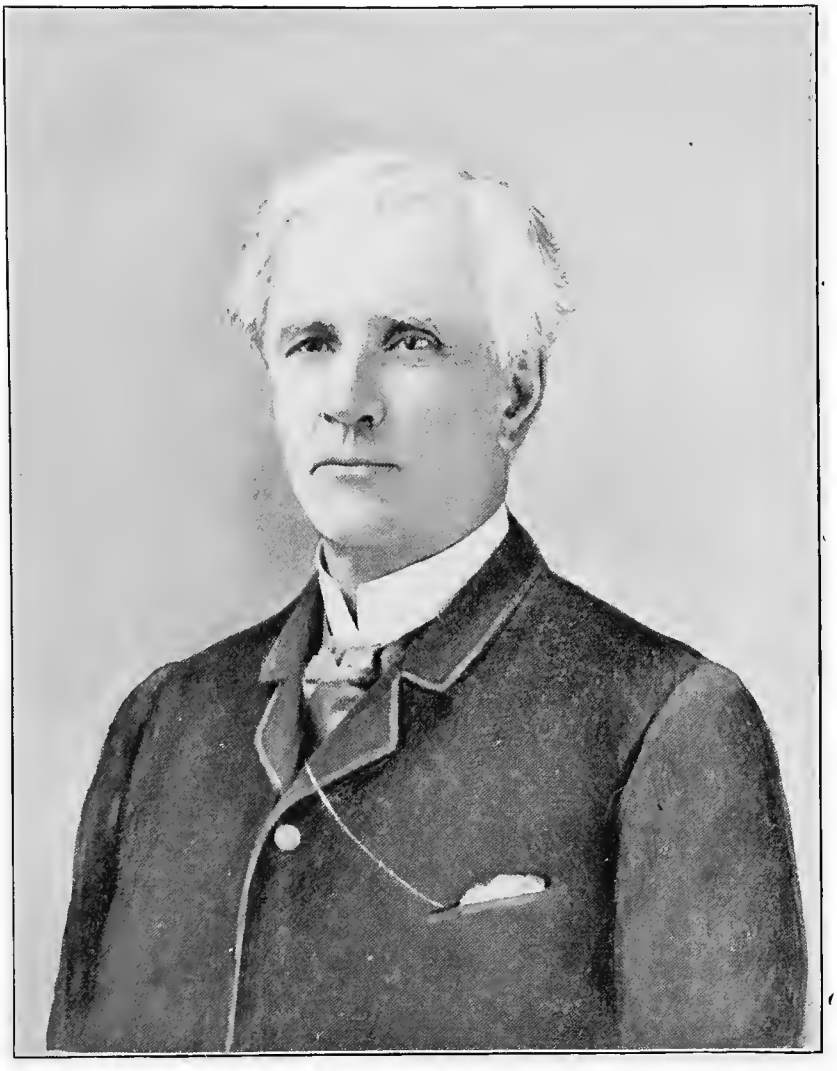
§ 6. The board of general managers of the State is also empowered to take such steps and make such preparation as in their judgment may be necessary or proper for the representation of the State of New York upon the occasion of the naval review in New York harbor in April, 1893, which is to be held pursuant to section eight of the act of Congress hereinbefore referred to. And they are also hereby authorized and empowered to provide with appropriate ceremonies for the commemoration within the State on the 12th day of October, 1892, of the 400th anniversary of the discovery of America.

§ 7. The total expenditures to be incurred under the provisions of this act shall not exceed the sum of $300,000; and for the purpose of paying such expenditures, the sum of $300,000, or so much thereof as may be necessary, is hereby appropriated out of any moneys in the treasury not otherwise appropriated, to be paid by the State Treasurer upon the warrant of the Comptroller, issued upon the requisition of the board of general managers, signed by its president and secretary, accompanied by estimates of the expenses for the payment of which the money so drawn is to be applied.

§ 8. This act shall take effect immediately.

### APPOINTMENTS.

A board of general managers of six members was provided for, of whom three were named in the act, Messrs. Chauncey M. Depew, of New York city, John Boyd Thacher, of Albany, and Gorton W. Allen, of Auburn, previously appointed by the President of the United States members of the World's Columbian Commission from the State of New York. On April 12, 1892, the following were appointed by Governor Flower as the other three members of the Board: Messrs. Louis Meredith Howland, of New York city, Walter L. Sessions, of James town, and Charles A. Sweet, of Buffalo. The board, as thus constituted, was non-partisan, Messrs. Depew, Allen and Sessions, representing the Republican party, and Messrs. Thacher, Howland and Sweet the Democratic party. On April twelfth the Governor appointed John Foord, of New York city, secretary, and on April eighteenth ex-Sena-



WALTER L. SESSIONS, Board of General Managers

tor Donald McNaughton, of Rochester, chief executive officer of the board.

In accordance with the provisions of the act the Governor also appointed, on April twelfth, the following as the Board of District Commissioners of the State:

*First Judicial District.*

| | |
|---|---|
| Richard Delafield | New York. |
| Samuel W. Fairchild | New York. |
| James W. Tappin | New York. |

The office of the first district commission was in the Madison Square Bank Building, New York city. Chief clerk, Edmund C. Stanton.

*Second Judicial District.*

| | |
|---|---|
| Daniel M. Somers | Brooklyn. |
| Cord Meyer, Jr | Brooklyn. |
| Henry Seibert | Brooklyn. |

The office of the second district commission was in the Eagle Building, Brooklyn. Chief clerk, John Phillips.

*Third Judicial District.*

| | |
|---|---|
| John T. Norton | Albany. |
| William H. Rowe, Jr | Troy. |
| Manly B. Mattice | Catskill. |

The office of the third district commission was in the Capitol, Albany. Chief clerk, George S. Stevens.

*Fourth Judicial District.*

| | |
|---|---|
| Edward Ellis | Schenectady. |
| Thomas J. Whitney | Gouverneur. |
| George S. Weed | Plattsburgh. |

The office of the fourth district commission was in the Town Hall, Saratoga Springs. Chief clerk, Harry S. Estcourt.

*Fifth Judicial District.*

| | |
|---|---|
| John F. Gaynor | Fayetteville. |
| Walter N. Kernan | Utica. |
| George B. Sloan | Oswego. |

The office of the fifth district commission was in the Kirk Building, Syracuse. Chief clerk, William H. Cole.

*Sixth Judicial District.*

Hugh Duffy ..... Cortland.
George F. O'Neil ..... Binghamton.
Robert H. Thurston ..... Ithaca.

The office of the sixth district commission was in Strong Block, Binghamton. Chief clerk, J. F. Hawkins.

*Seventh Judicial District.*

William S. Kimball ..... Rochester.
Henry Stowell ..... Seneca Falls.
Edwin C. Cook ..... Bath.

The office of the seventh district commission was in the Chamber of Commerce, Rochester. Chief clerk, William H. Benjamin.

*Eighth Judicial District.*

Henry Koons ..... Buffalo.
Willard T. Ransom ..... Lockport.
Henry W. Box ..... Buffalo.

The office of the eighth district commission was at 9 Niagara street, Buffalo. Chief clerk, George T. Smith.

The president, secretary and treasurer of each board are in the order named. Messrs. Tappin, Meyer and Norton were subsequently appointed in place of the original appointees, Walter Stanton, Orlando B. Potter and Robert C. Pruyn, respectively, who were unable to serve.

ORGANIZATION OF BOARD.

In accordance with the call of the Governor, the Board of General Managers held its first meeting at the Capitol, in the city of Albany, on April 19, 1892. At that meeting Hon. Chauncey M. Depew was elected president, and Hon. Gorton W. Allen vice-president. The following code of rules and regulations was adopted for the guidance of the board:

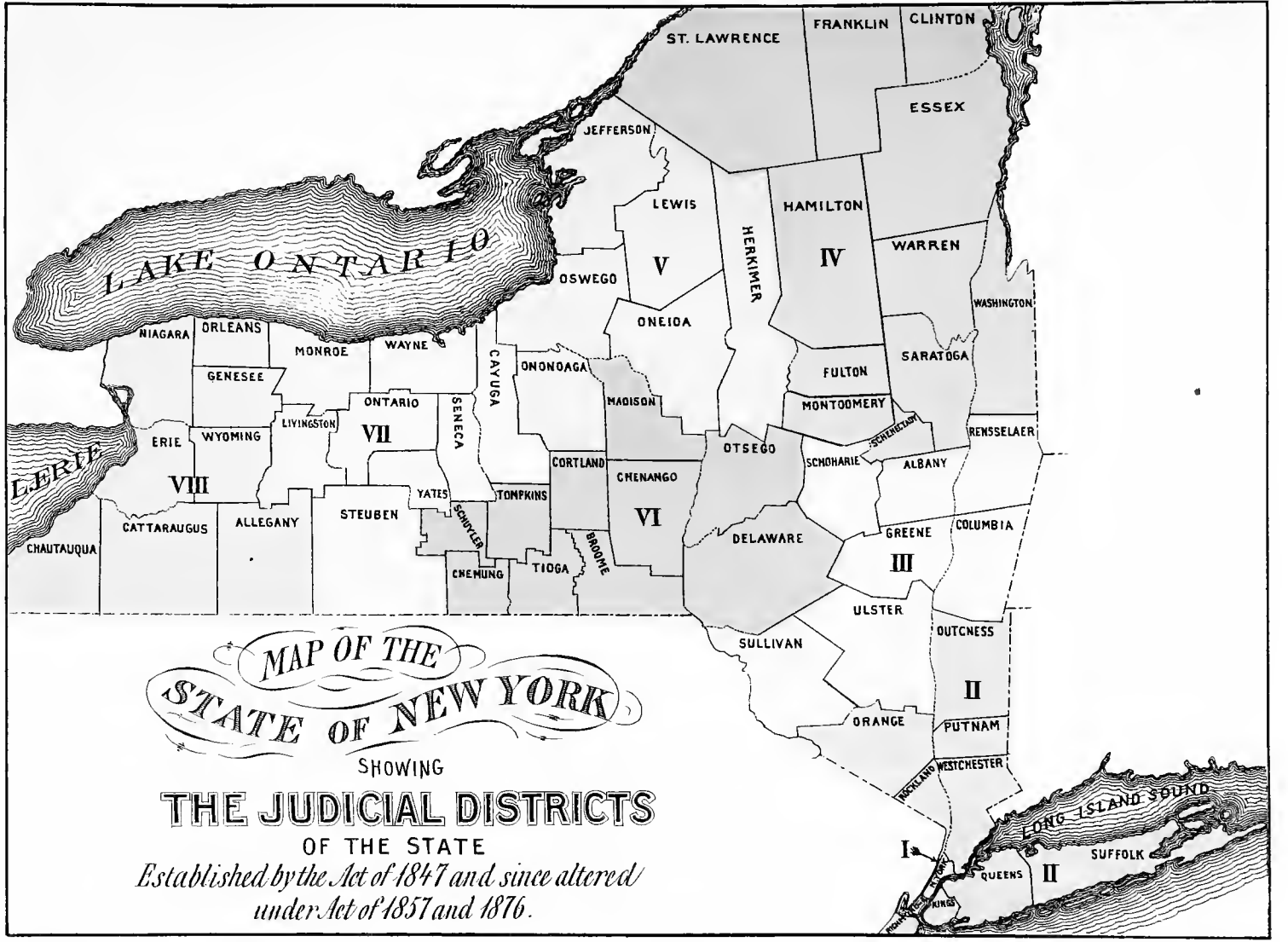
RULES AND REGULATIONS OF THE BOARD OF GENERAL MANAGERS.

*Rule I.*

The official title of this body of six commissioners shall be "The Board of General Managers of the Exhibit of the State of New York at the World's Columbian Exposition."

*Rule II.*

The board shall elect from its own members a president and a vice-president and an auditing committee of two members, who, with the chief




# MAP OF THE STATE OF NEW YORK

SHOWING

## THE JUDICIAL DISTRICTS

OF THE STATE

*Established by the Act of 1847 and since altered under Act of 1857 and 1876.*

executive officer and the secretary, as appointed by law, shall constitute the regular officers of the board. The board may, by a majority vote, reject any clerk or employee appointed by the chief executive officer, but the rejection must be made at the next meeting after the official notification of said appointment.

*Rule III.*

Regular meetings of the board shall be held on the third Tuesday of each month, commencing on the third Tuesday of April, 1892.

*Rule IV.*

The president or vice-president or any two members of the board, by writing, may issue notices for special meetings at any time.

*Rule V.*

Three members of the board shall constitute a quorum for the transaction of any business, but in an emergency two members, at a regular or special meeting, may consider business, and when such business is approved by one or more members it shall stand and be recorded as regular, the same as if a quorum had been actually present and assented thereto, provided that each member of the board shall be notified of the action taken and the subject considered by the two members at said meeting.

*Rule VI.*

The president or, in his absence, the vice-president, shall preside over all the meetings of the board. He shall appoint all committees, unless otherwise directed, and shall generally have all the power and authority incident to his office.

In the absence of the president and vice-president, the board may appoint a chairman who shall, for that occasion, exercise the functions of the president. In the absence of the president and vice-president he shall sign requisitions, as provided by section 7 of chapter 236, Laws of 1892.

*Rule VII.*

The chief executive officer shall exercise such direction and management of the office as shall make effective the various agencies employed.

He shall nominate to the board all clerks and employees in all the departments of the board and of the commissions of the several judicial districts; but all employees of said judicial district commissions shall be, as far as practicable, residents within their respective districts.

He shall fix and establish all salaries of officers, clerks and employees, subject to the approval of the board.

He shall in like manner have power to remove for cause, made in writ-

ing and filed in the office of the board, any and all officers, clerks and employees by him appointed.

He shall have the power by himself, or through any agent he may employ, to visit the several judicial districts and examine the work and management of the said judicial district commission.

It shall be his duty to make regular monthly reports to the board, and at such other times as the board may be in session or request such reports.

*Rule VIII.*

The secretary shall be in constant attendance in the rooms of the board.

He shall be present at all the meetings of the board, unless otherwise directed, and keep full and accurate records of all its proceedings, and shall make report of the same from time to time, as he may be required. All his records shall be open at all times to the inspection of any member of the board.

He shall perform such other duties as the chief executive officer or the board may impose upon him.

*Rule IX.*

There shall be an official seal, circular in form, with the following words around the margin thereof: "General Managers of New York at World's Columbian Exposition, 1893," and in the upper center of said seal shall be the coat of arms of the State of New York, and in the lower center a representation of a section of the stern of the ship "Santa Maria," with the figure of Columbus standing upon the high deck.

*Rule X.*

The Board of District Commissioners for each of the judicial districts shall be known as the "Judicial District Commission of the State exhibit at the World's Fair" (the number of the particular district being inserted before the word judicial).

It shall be the duty of each District Commission to meet upon the call of the chief executive officer of the Board of General Managers, and to proceed to organize by electing a president and secretary from its own members, who shall perform the duties incident to their office. It shall be the duty of these several commissions to promote, in every way possible, the World's Columbian Exposition, and to solicit a proper representation at the said exposition of the resources of the Empire State, and particularly an exhibition of such of the arts, industries, manufactures and products of the soil as may be within the boundaries of their respective districts. To this end they shall communicate with the different interests likely to make such exhibits, acquaint them with the classifica-

CHARLES A. SWEET, Board of General Managers

tion adopted by the World's Columbian Commission, the rules for the installation of exhibits, the arrangements for transportation to and from Chicago, the regulations for making awards and premiums, and all such other information as may enable our citizens to make a creditable display of their exhibits. But it shall not be permitted to make any money aid or grant to any exhibitor or to the representative of any industry.

The several commissions may adopt rules and regulations for their own government, provided such rules and regulations do not conflict with the rules of the Board of General Managers, or with the rights, powers and privileges of said board.

The sum of $10,000, or so much thereof as may be necessary, is hereby set apart for the salaries of employees and the expenses of each of the said commissions, and the chief executive officer, upon the requisition of the respective commissions, may warrant and approve the several items of expenditures within the limit here provided, which shall be necessary for the proper conduct of the commissions. Weekly reports shall be made to the chief executive officer of the progress of the work by each of the said commissions.

No member of said commissions shall receive any compensation for his services unless especially authorized by the chief executive officer, and then only for his actual expenses.

*Rule XI.*

The Board of Women Managers shall consist of twenty-one women, residents of the State, and appointed by the Board of General Managers. They are to work in conjunction with the general managers in promoting the interests of the World's Columbian Exposition, and to assist the representative women of the nation in obtaining for that occasion a full and complete portrayal of the industrial and social conditions of woman and her achievements and capabilities in all the avenues and departments of life, and, therefore, they shall be and hereby are empowered to exercise such authority and control in their department as shall be consistent with a liberal construction of the act of the Legislature creating the board, and with the rules herein adopted. They shall meet in the Capitol at Albany, upon the call of the chief executive officer, and proceed to organize by electing a president, first and second vice-presidents and a secretary. As soon thereafter as practicable they shall elect an executive committee of six, who shall have all the powers and rights of the full board when in session.

The said board shall establish its bureau in the rooms of the Board of General Managers, and shall have such clerical aid as the chief executive officer may provide.

The Board of Women Managers, or its executive committee, shall make regular monthly reports to the Board of General Managers, or more frequently if so requested.

The sum of $25,000, or so much thereof as may be necessary, is hereby set apart for the maintenance and expenses of the said Board of Women Managers, and all expenses shall, as far as practicable, be estimated and the consent of the Board of General Managers obtained thereto before they shall be actually incurred.

The president of the women's board, the chairman of its executive committee and the secretary of the women's board are hereby constituted an auditing committee, who shall audit and approve all bills for expenditures. When so approved the regular auditing committee of this board may approve of the same, and thereupon the said bills shall be presented for payment as provided by law.

The Board of General Managers reserves to itself the right and privilege of presenting such further rules and regulations for the guidance of the Board of Women Managers as shall, from time to time, seem expedient.

The Board of Women Managers may be called together from time to time as shall seem expedient to the Board of General Managers.

*Rule XII.*

The auditing committee shall examine and audit all bills and accounts.

*Rule XIII.*

A member of the board may hold the proxy of any other member and cast a vote by virtue of said proxy on any question which may come up at any regular or special meeting and under any circumstances where any member might have a right to vote, provided that three or more members of said board shall be present at said meeting.

*Rule XIV.*

No rule shall be amended, altered or modified, except by four affirmative votes.

The auditing committee of the board appointed in pursuance of these regulations were Hon. John Boyd Thacher, of Albany, and Hon. Walter L. Sessions, of Jamestown. These gentlemen served continuously as this committee, with the exception of Mr. Sessions, who was replaced during the exposition period by Hon. Gorton W. Allen, of Auburn.

SEAL OF THE BOARD OF GENERAL MANAGERS OF THE EXHIBIT OF THE STATE OF NEW YORK.

SEAL OF THE BOARD OF WOMEN MANAGERS OF THE EXHIBIT OF THE STATE OF NEW YORK

[FOR LEGEND, SEE PAGE 160.]

## WORK OF THE BOARD IN 1892.

Pursuant to a call issued by the chief executive officer and the secretary, the members of the Board of General Managers and of the Judicial District Commissions, met in conference in the Assembly parlor in the Capitol at Albany, on Thursday, April 28, 1892. By invitation, the Hon. George R. Davis, director-general, and Mr. F. J. V. Skiff, chief of the department of mines and mining of the World's Columbian Exposition, were also present. After a free interchange of views in regard to the place which New York ought to occupy at the World's Fair, it was resolved that the Judicial District Commissioners, in company with a delegation from the Board of General Managers, should visit Chicago for the purpose of studying on the ground and in conference with the exposition authorities, the conditions under which the State would be required to make its exhibit. The visit was made on May 11, 1892, and the party spent a few days in the examination of the exposition buildings and in learning from the heads of the various departments facts necessary for the information of exhibitors and for their own guidance in the performance of their duties. A stenographic report was made of interviews held in the exposition offices with several of the department chiefs, which, published in pamphlet form, was found to be a most valuable repository of information in regard to the organization and methods of the World's Fair.

On the return of the visiting delegation from Chicago, a joint meeting of the Board of General Managers and of representatives from the Judicial District Commissions was held in Albany on May 17, 1892, and the following address was prepared and issued:

*To the People of the State of New York:*

The World's Columbian Exposition has reached a stage of development at which it is manifestly necessary to set forth the relations towards it of the people and the State of New York. The reputation of the whole country is deeply involved in the character of the exhibits which the States will make in the various departments of the exposition. A careful personal investigation of what has been already achieved or securely pledged towards the realization of the greatest of all the displays yet attempted of the fruits and achievements of modern civilization has convinced us that the United States have nothing to fear in the comparison of their products with those of the other nations of the earth. The fore-

most State of the Union may fitly share in the satisfaction which such a conviction is calculated to produce.

The representatives of the State are fulfilling a plain duty in urging New York to take such a place and make such a showing at the exposition as her rank in the Union demands. It ought not to be necessary for them to point out that the simplest dictates of self-interest require New York to stand well in comparison with her sister States, no less in the estimation of foreign observers than in that of our own people. Her supremacy in most of the great departments of American commerce is not so impregnable as to allow her to dispense with the visible manifestation of it which will be expected of her in the coming congress of nations. The amplitude, richness and variety of the natural resources of the State are generally known and acknowledged, but she is not relieved of the necessity for their presentation at the World's Fair. And, apart altogether from any question of immediate or ulterior profit, the prompting of State pride ought to be sufficient to impel New York to make a display commensurate with her imperial position. To secure such a result within the necessarily short time which must elapse before the final allotments of space are made will require prompt, vigorous and united action on the part of a l the interests concerned in making the desired exhibit.

The responsibility of various societies, associations and institutions, sustained in whole or in part by the bounty of the State, for demonstrating to the world the value of the results which public aid has enabled them to achieve, is no less obvious than is that of the private exhibitor or of the State managers and commissioners for guiding them and others in the discharge of a public duty. In the departments of agriculture, forestry, mining and education there is but little commercial impulse to stimulate private individuals in making exhibits worthy of New York. Higher considerations must influence the exhibition of the resources and applied educational methods of the State. And even where the element of commercial advantage does enter into the making of an exhibit it is well that the sentiment of State pride should be awakened.

In each of the districts which your commissioners represent there are special interests of an industrial or agricultural nature which are characteristic of the district. In trying to secure a proper display of these at the World's Fair the district commissioners may fairly expect the active and ready co-operation of their neighbors.

There will be a disposition to reflect on the managers and commissioners of the State exhibit should New York make a poor showing at the World's Fair. But they are obviously powerless to do for the State what its people will not do for themselves. They appeal, therefore, to the

people to lay aside any feeling of indifference which they may entertain toward the World's Columbian Exposition and to recognize the fact that New York cannot afford to be anywhere but among the foremost participants in the great national success which the exposition is destined to be.

Intending exhibitors from New York will stand on equal terms with earlier applicants from other States if they are prompt in responding to the appeal which will be made to them by the commissioners of their districts. It will greatly facilitate the work to be done if all applications for space are addressed to the president of the board of commissioners of the district in which the intending exhibitor's place of business is situated. No positive assurance can be given to any applicant that he will have the space he asks for; but it will be one of the duties of the representatives of the State to insist on New York having, in all the great industrial departments of the exposition, the relative allotment of space to which the magnitude and variety of her products entitle her. They have a record of all the applications already made, and are in daily communication with the exposition authorities in regard to new applications. Prompt attention will be given to all inquiries addressed to any of the district managers, the location of whose headquarters will shortly be made public. The managers and commissioners of the State exhibit begin their work profoundly impressed with the greatness and brilliancy of the achievement which the civilized world will be invited to contemplate at Chicago next May. It will be their earnest endeavor to see that New York secures her full share of its lustre.

Signed by the Board of General Managers and the Judicial District Commissioners.

At the date of the issue of the foregoing address the number of applications for space at the exposition received from the State of New York did not greatly exceed 400. After the time fixed for filing applications had expired the number of New York applications was found to be 2,486. These were for purely commercial or individual exhibits, and did not include the contributors, numbered by thousands, to the various exhibits installed under the direction of the State, whose cost was defrayed from the appropriations disbursed under the authority of the board. The personal applications which passed through the hands of the board, and which were for the most part collected by the district commissions, were distributed as follows among the thirteen great departments of the exposition :

| | | |
|---|---|---|
| A. | Agriculture: food and its accessories, agricultural machinery and appliances | 190 |
| B. | Horticulture | 119 |
| C. | Live stock: domestic and wild animals | 22 |
| D. | Fish, fisheries, fish products and apparatus of fishing | 26 |
| E. | Mines, mining and metallurgy | 94 |
| F. | Machinery | 280 |
| G. | Transportation: railways, vessels, vehicles | 194 |
| H. | Manufactures | 924 |
| J. | Electricity and electrical appliances | 105 |
| K. | Fine arts: painting, sculpture, architecture, decoration | 43 |
| L. | Liberal arts: education, engineering, public works, constructive architecture, music and the drama | 460 |
| M. | Ethnology, archæology; progress of labor and invention; isolated and collective exhibits | 18 |
| N. | Forestry and forest products | 11 |
| | Total | 2,486 |

It became obvious very early in the experience of the board that on it would devolve the duty of providing for the proper representation of the State in all departments where the commercial prompting was not sufficiently strong to draw out exhibits to be installed and maintained at individual expense. It was found that no State department or State supported association had funds available for presentation at the World's Fair of the fruits of its activity. It is hardly necessary to explain in detail why the board made the selection and classification which it did of the exhibits best fitted to illustrate the resources, the history and the present position of the State in education, art and civil government. What was being done by other States had, of course, a certain influence on the decisions of the board; what the State owed to itself was, however, the controlling impulse. In this connection it may not be amiss to recall the fact that the feeling was still strong in Chicago and throughout the West that New York was unfriendly to the Columbian Exposition. That New York had not succeeded in its effort to be selected as the site of the World's Fair of 1893 was deemed to be sufficient reason for an absence of good-will on the part of its citizens toward the enterprise undertaken by the city to which Congress had awarded the coveted honor.

DONALD McNAUGHTON, Chief Executive Officer

One of the first duties of the Board of Managers was, clearly, to endeavor to remove such an impression. New York could not afford to be held to occupy such a position toward an exposition with whose success or failure the reputation of the whole American people was indissolubly bound up. Nor was it on grounds of mere self-interest held to be expedient that New York should be placed in an unfavorable light before the community with which its commercial relations are of the closest. What any other State proposed to do it was deemed fitting, no less with due regard to the dignity than to the manifest obligations of the State, that New York should in its own sphere excel.

The fact should be recorded that it was not left entirely to the official representatives of the State to wipe out the reproach which had been directed against New York for apparent lack of appreciation of the greatness of the exposition enterprise. New York architects had been early called into the councils of the constructors of the fair buildings, and, as stated in the introduction, four of the chief of these were the work of New Yorkers. New York sculptors and painters also contributed their full share toward making the exposition grounds, and the facades of the chief exposition buildings, forever memorable in the history of the development of American art.

Nor was the participation of the commercial and manufacturing establishments of the State less amply significant of the strong interest taken in the fair by the people of New York. Owing to the impossibility of securing an adequate allotment of space, or from other causes of difference with the exposition authorities, the exhibits of certain representative New York firms were noticeably absent. But in all the great aggregate of the results of American industry, ingenuity and taste which was so strikingly displayed at the Columbian Exposition, there were but few out of the whole one hundred and seventy-six groups in which some product of New York was not the dominant feature. In the department of manufactures, foreign nations had, for the most part, provided imposing and ornate pavilions for the collective installation of their exhibits. Around the center circle of the vast building were grouped the exhibits of Germany, France, Great Britain and the United States. The last named occupied the whole northeastern section of the building, and covered an area of some 300,000 square feet. No attempt was made to treat this as a whole after the French and German manner, the rule being that each exhibitor should be left to pro-

vide his own booth, according to a design approved by the bureau of construction. But it became apparent that facing the magnificent pavilions of France and Germany the scattered booths of American exhibitors would suffer by contrast. For the construction of a dignified entrance pavilion to the American section the exposition company had no funds, and the government of the United States had made no provision. It was reserved for the enterprise of three firms — two of them distinctively of New York city and one having its chief place of business there — to do what was needed to sustain the dignity and reputation of the country. The pavilion, jointly erected by Tiffany & Co., the Tiffany Glass and Decorating Company and the Gorham Manufacturing Company, was a very striking product of the architectural skill of John Du Fais, of New York city, and most effectually redeemed from any suggestion of commonplace the central facade of the American section of manufactures.

The New York Central railroad performed a similar service for the south front of the transportation annex, and both it and the Wagner Palace Car Company made a showing as lavish in its disregard of cost as it was impressive in its relation to the perfection of existing appliances for rapid and luxurious travel by rail. In that most remarkable characteristic of the exposition — the manifold application and transmission of electric force — the work of the General Electric Company of New York was predominant. To the department of horticulture New York men were by far the largest contributors, and the works of New York artists occupied about three-fourths of the whole space of the American section in this department. The applications of these latter were passed on by a special committee in New York city, and those already recorded as passing through the hands of the board were but a small part of those actually made. In like manner the applications for the successive live stock shows were necessarily of later date than the purely commercial entries, and went, for the most part, directly to the authorities immediately in charge. The representation of New York in this department was, therefore, much more ample than the figures above given would indicate.

## THE BOARD OF WOMEN MANAGERS.

Section 4 of the general act empowered the Board of General Managers "to appoint a board of women managers, of such number and to perform such duties as may be prescribed by the board of general

managers." In pursuance of this clause, and under rule XI of the rules and regulations, the board appointed, June 3, 1892, the following representative women of the State as members of the Board of Women Managers:

*First Judicial District.*

Mrs. Arthur M. Dodge..... New York city.
Mrs. Fred R. Halsey..... New York city.
Miss Annie Hemstrought..... New York city.
Miss J. Imogen Howard..... New York city.
Miss Anna Roosevelt..... New York city.
Mrs. Oscar S. Straus..... New York city.
Mrs. George Waddington..... New York city.
Mrs. H. Walter Webb..... New York city.

*Second Judicial District.*

Mrs. Frederick P. Bellamy..... Brooklyn.
Miss Elizabeth T. Minturn* ..... Hastings-on-the-Hudson.
Mrs. J. S. T. Stranahan ..... Brooklyn.

*Third Judicial District.*

Mrs. Erastus Corning..... Albany.
Mrs. Dean Sage..... Menands.

*Fourth Judicial District.*

Mrs. William J. Averell..... Ogdensburgh.

*Fifth Judicial District.*

Mrs. Howard G. White ..... Syracuse.

*Sixth Judicial District.*

Mrs. Leslie Pell-Clarke..... Springfield Centre.
Mrs. Andrew D. White..... Ithaca.

*Seventh Judicial District.*

Miss Caroline E. Dennis..... Auburn.
Mrs. Charles F. Wadsworth..... Geneseo.

*Eighth Judicial District.*

Miss Maria M. Love..... Buffalo.
Miss Frances Todd Patterson..... Westfield.

*Afterwards replaced by Mrs. Frederick Rhinelander Jones, New York city.

On June seventh the Board of General Managers, on the nomination of Chief Executive Officer McNaughton, approved the following appointments for the women's board: Mrs. Candace Wheeler, in charge of the bureau of applied arts, and Mrs. Florence C. Ives, chief officer.

It is worthy of note that New York corrected in the title, "Board of Women Managers," the possible solecism adopted by Congress in the creation of the term "Lady Managers."

The work of the Board of Women Managers will be found fully detailed in the special report incorporated herewith. It was of the highest efficiency, and reflected great credit on the executive committee. The best of women's work in all departments was brought out by systematic efforts and a true estimate made possible of its industrial value.

The many social functions held under their management, a full list of which may be found under the description of the New York State Building, were memorable successes, and the afternoon teas served in the women's reception room of the State Building an enjoyable innovation to the routine of sight-seeing.

### ESTABLISHING OF SUB-DEPARTMENTS.

The short time intervening before the opening of the exposition rendered it imperative for the Board of General Managers to procure the aid of experts in many departments, who could give their time to the preparation of a fitting exhibit. The board reserved to itself the approval of plans and the supervision of expenditures in these departments.

The dairy interests were the first to be provided for, a clause in the general act authorizing such an exhibit, and the attendance of a committee from the State Dairymen's Association at one of the early meetings of the board, closing the arrangements. Mr. Josiah Shull, of Ilion, was placed in charge of the preparations about the first of May.

On July nineteenth a committee from the officers of the New York State Agricultural Society conferred with the Board of Managers with reference to an agricultural exhibit, and as a result of the deliberations a bureau of agriculture was formed of which Mr. James Wood, of Mount Kisco, was made director in chief.

During July and August the following interests were placed in special hands: Floriculture, arboriculture, etc., in charge of Mr. James Dean, of Bay Ridge; pomology, in charge of Mr. George T. Powell,

JOHN FOORD, Secretary Board of Managers

of Ghent; viticulture, in charge of Mr. George C. Snow, of Penn Yan; the Indian exhibit, in charge of the Rev. John W. Sanborn, of Naples; forestry, in charge of Mr. Romeyn B. Hough, of Lowville; apiarian exhibit, in charge of Mr. Orel L. Hershiser, of Buffalo; mines and mining exhibit, in charge of Prof. F. J. H. Merrill, of Albany. The educational exhibit was one of the last to be provided for, but on September twenty-third an advisory committee of the leading educators of the State was appointed, and Secretary Melvil Dewey, of the University of the State of New York, was made director of the educational exhibit.

The Board of General Managers took upon itself the duty of bringing to the notice of every possible commercial exhibitor, through the agency of the district commissioners and otherwise, the importance of having the industries of the State adequately represented, and of providing all needful information; of securing by the aid of the Board of Women Managers a fitting representation of the results of women's work; of providing for the erection, equipment and maintenance, on the World's Fair grounds, of a State building fitly representing the supremacy in dignity, wealth and commercial importance of the State of New York; of providing for transportation, insurance and care of all exhibits; of providing, as directed by law, for the celebration within the State of the 400th anniversary of the Columbian discovery; and of complying with the terms of the law by preparing for the proper representation of the State at the naval review in New York harbor, in April, 1893.

The board also immediately supervised the collection of an archæological exhibit, illustrative of the pre-historic development of the State; a colonial exhibit; an exhibit in the transportation department, with the aid of the State Engineer and Superintendent of Public Works; an exhibit of the charitable, penal and correctional institutions of the State, with the co-operation of the State Board of Charities; and a display of modern contributions to painting and sculpture in the State, with the aid of the Associated Artists of New York.

When the board was organized no such diversity and range of duties were anticipated for it, but as the subject was developed the unlimited possibility of showing the material wealth of the State and of drawing attention to resources whose development and amplitude were but partially understood even by its own people, rendered their task arduous in the extreme; nothing but the untiring energy, continuous

devotion to work and expedient brain of the chief executive officer rendered a satisfactory solution possible. At the close of the summer of 1892 such gratifying results had been reached as to put beyond doubt any question of success. The six months between the creation of the commission and the opening of autumn had been crowded with work, and the breathing spell in the labors of the commissioners afforded by the Columbian celebrations in New York and Chicago was richly enjoyed, for it not only saw satisfactory progress being made in every exhibit department and the New York State Building sufficiently completed for dedication, but also saw the reproach disappear that New Yorkers were unfriendly to the fair.

THE COLUMBIAN CELEBRATION IN NEW YORK OCTOBER 10–12, 1892.

Under the provisions of the law creating this board and of those of chapter 331, relating to the celebration in the city of New York and making the 400th anniversary of the discovery of America, a State holiday, the date of that observance was fixed on the 12th of October, 1892. The act of Congress creating the World's Columbian Commission prescribed the same date for the national celebration at Chicago and for the formal dedication of the exposition buildings. It was deemed by this board to be desirable to prevent, if possible, any appearance of rivalry between the elaborate celebration projected in New York and that which had to take place in Chicago. It was thought that both would be deprived of some of their lustre by being made simultaneous. Special weight was given to the consideration that a fitting representation of the State at both would be impossible if they occurred on the same day. New York could as little afford to deprive its own celebration of due official recognition as it could to be conspicuous by its absence from the assemblage of State officers and public bodies at the place selected for the ceremonial having a national significance.

After long consideration on the subject, Hon. John Boyd Thacher, a member of this board, publicly proposed that the date of the dedication ceremonies in Chicago should be changed from October 12 to October 21, 1892, and gave forth the following reasons for the change:

The celebration of the landing of Columbus, which we shall observe this year, will fix that event in the American mind, especially in the mind of Young America, indelibly. When we say that Columbus landed on October twelve, we refer to the old or Julian calendar and not to the Gregorian calendar, adopted in 1582 and used throughout the Christian world except in Russia. If we are to be exact in commemorating the 400th anniversary of the Columbian discovery, our celebration must fall on the twenty-first of October, which corresponds, according to the Gregorian calendar, with the twelfth day of October of the Julian calendar. It requires the dropping of just nine days to make an event which is marked in the Julian calendar as happening in the fifteenth century, agree with the true astronomical, tropical date. After 1582 ten days were dropped to correct the false date or old style. England did not adopt the Gregorian calendar till 1752, when it became necessary to drop eleven days. Besides the propriety of correcting the date, we have the best of precedents in

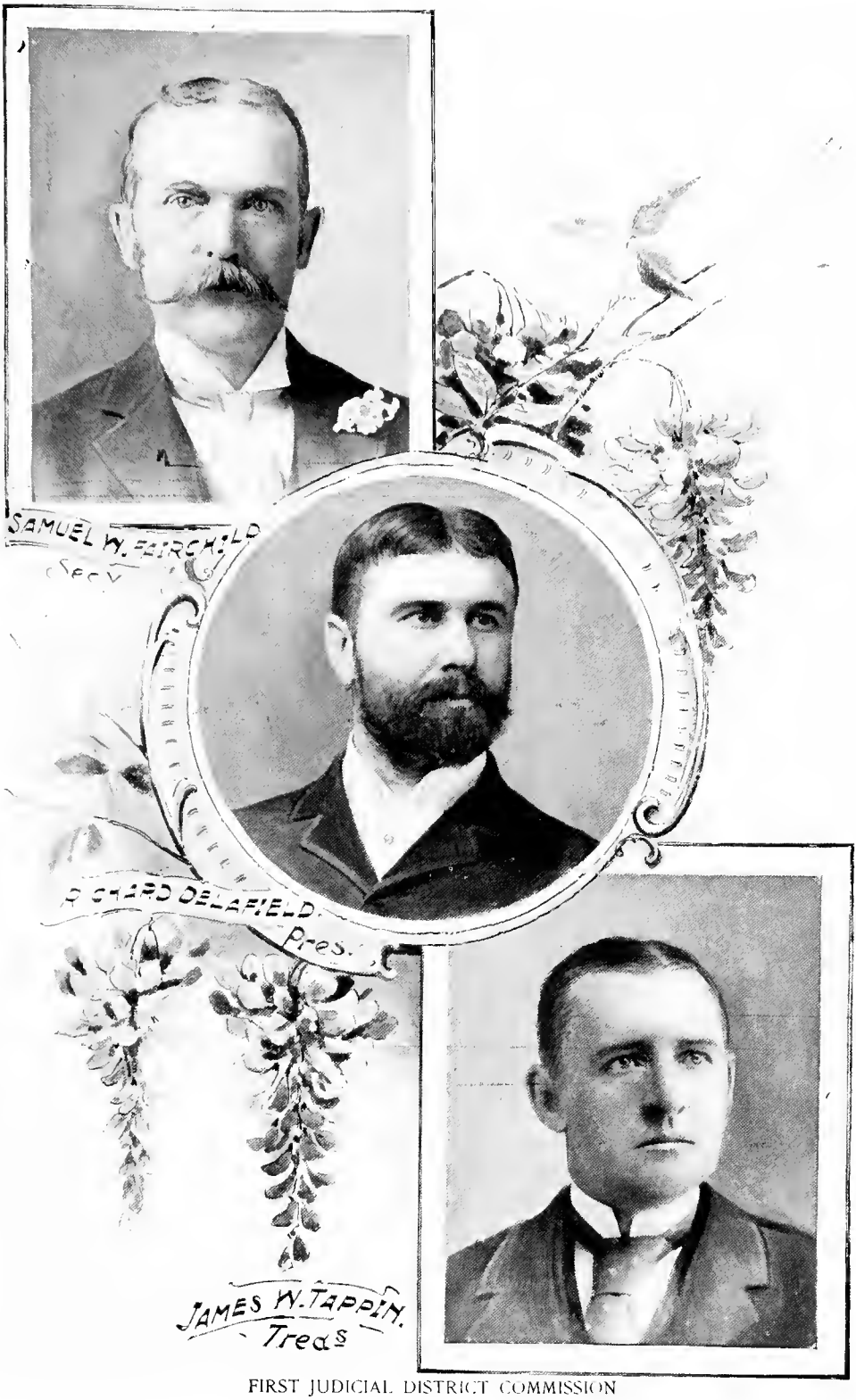
American history. Forefathers' day is celebrated in New England on November nineteen, although the Pilgrims reached Plymouth November 9, 1620; Boston celebrates the anniversary of the foundation of the city on September seventeen, although the event occurred, according to the old calendar, on September seven. The people of Providence make a similar correction for Founders' day. Washington was born on February 11, 1732, yet we celebrate his birthday on the twenty-second of February, the discrepancy between the civil and astronomical time being then eleven days.

We want to imagine that it was exactly 400 years ago to a day that Columbus and his followers first saw the land of the New World. The only way to make sure of this is to find just when the longitude of the sun at this time will correspond with the longtitude of the sun October 12, 1492. Astronomers tell us that this day in the year 1892 will be October twenty-one. We shall be wrong if by the object lesson of the ceremonies at Chicago we do not fix October twenty-one as the precise anniversary day of Columbus' landing.

The efforts of this board were accordingly directed to obtaining from the Congress and the President of the United States a change of the date fixed for the national anniversary. Mr. Thacher further elicited a consensus of opinion from historians, astronomers and public men as to the expediency of correcting, for all time, the date of Discovery day, and as to the correctness of the date of October twenty-one. The result was an almost unanimous body of testimony in favor of the change. The board requested the representatives of the State in Congress to favor the desired amendment to the law, and its members labored with the exposition directory and with legislators and public officers at Washington to bring about this result.

These and other efforts had their due effect, and by presidential proclamation, as well as by amendment of the law, the national anniversary of the discovery of America was made to conform to the accepted chronological style. This was a happy solution of the difficulty, and the subsequent events proved the wisdom of the New York Board of Managers. Both celebrations were magnificent in their details, and each would have undoubtedly obscured the other in some degree if compelled to happen on the same day.

Meanwhile the Committee of One Hundred in charge of the New York celebration were preparing a magnificent programme. The law under which the committee was authorized to act is here given in full as a matter of historical reference:




FIRST JUDICIAL DISTRICT COMMISSION

## CHAPTER 331.

AN ACT to provide for the celebration in the city of New York of the 400th anniversary of the discovery of America.

Approved by the Governor April 18, 1892. Passed, three-fifths being present.

*The People of the State of New York, represented in Senate and Assembly, do enact as follows :*

SECTION 1. Within ten days after this act becomes a law the mayor of the city of New York shall select and appoint a committee of one hundred citizens of that city, which committee shall be a committee to conduct, manage and direct the celebration in the city of New York of the 400th anniversary of the discovery of America.

§ 2. The mayor of the city of New York, the president of the common council of the city of New York, and three members of said common council, to be selected by the common council of the city of New York, shall be ex-officio members of said committee.

§ 3. The members of said committee are hereby created a committee with power and authority in the name of and in behalf of the mayor, aldermen and commonalty of said city, to make proper provisions for the celebration in said city of the discovery of America.

§ 4. The members of said committee shall meet in the city of New York, at a time and place specified by public notice by the mayor of said city within ten days after their appointment by the mayor. The members of said committee shall organize for the election of such officers and committees and the adoption of such rules and regulations as they shall deem expedient.

§ 5. Such committee shall have power to provide for an executive committee, which, subject to the rules and regulations of said committee hereby created, shall have power to act in its stead, when it is not in session. A majority of said board shall constitute a quorum for the transaction of business, but no contract involving the expenditure of money shall be made ; no executive officer, officers or executive committee shall be appointed and no rules governing the executive officer or officers and the executive committee shall be adopted except by the affirmative vote of two-thirds of all the members of said committee. Nothing herein contained, however, shall be deemed to prohibit the said committee by the two-thirds vote of all the members thereof from delegating to the executive committee the power to make contracts involving the expenditure of money and to make rules and regulations for its own government and the government of the executive committee, officer or officers not in conflict with those of the board.

§ 6. The members of the committee as appointed by the mayor shall serve until the 1st day of March, 1893, or until their successors are appointed, and such successors shall be appointed by the mayor of the city of New York within five days after the creation of a vacancy in said committee.

§ 7. It shall be lawful for said committee on the celebration of the discovery of America, with the written permission of the mayor of said city and upon such terms and conditions as he may prescribe, to use between the 8th day of October and the 17th day of October, 1892, such streets, avenues, squares and parks, in the city of New York, as may be specified in such permit for the erection and maintenance therein of such structures as may be approved of by the said mayor, the superintendent of buildings and the fire department of said city, to be used and employed solely for the purposes of such celebration and for such parades as said committee may provide for, and the said committee, upon receiving such permit, shall be entitled to erect and maintain such structures on such portions of said streets, avenues, squares and parks for and during the period of time above specified, and shall be entitled to the exclusive possession and use of the same for the purposes aforesaid. Such permit shall be subject at any time to revocation by the said mayor.

§ 8. The use of said streets, avenues, squares and parks for the above-mentioned purpose is hereby declared to be a public use and consistent with the public purposes for which said streets, avenues, squares and parks are held by the mayor, aldermen and commonalty of the city of New York.

§ 9. The board of estimate and apportionment of the city of New York is hereby authorized and empowered to appropriate a sum not exceeding $50,000, or so much thereof as may be necessary, to be expended by and under the direction of said committee for the celebration of the discovery of America, which sum is to be employed in decorating the City Hall and other buildings of the city, for a display of fireworks in the several parks and places of the city and for other expenses of the said committee in connection with said celebration, and upon such appropriation being made the comptroller of the city of New York is hereby directed to issue and sell revenue bonds of said city for the purpose of providing funds on account of such appropriation.

§ 10. The committee aforesaid shall immediately appoint after its organization an auditing committee of three members, whose duty it shall be to audit all bills payable on behalf of the city on account of said committee, and the comptroller is hereby directed to pay out no moneys on account of such celebration unless vouchers therefor are properly passed

and audited by the entire auditing committee of the said committee of one hundred.

§ 11. The said committee of one hundred shall select a treasurer, who shall account to the comptroller of the city of New York for all moneys passing through his hands, and shall pay to the comptroller of said city all moneys received by him on behalf of said committee from rentals of stands and other income, and such moneys thus collected and paid over to the comptroller aforesaid shall be applied by him to the payment and liquidation of the bonds heretofore directed to be issued and be an offset to the account of said bonds.

§ 12. This act shall take effect immediately.

## CHAPTER 332.

AN ACT to designate October 12, 1892, the 400th anniversary of the discovery of America, a holiday to be observed in the acceptance and payment of bills of exchange, bank checks and promissory notes, and in the closing of public offices.

Approved by the Governor, April 18, 1892. Passed, three-fifths being present.

*The People of the State of New York, represented in Senate and Assembly, do enact as follows:*

SECTION 1. The 12th day of October, 1892, being the 400th anniversary of the discovery of America, shall for all purposes whatsoever in respect to the presenting for payment or acceptance and of the protesting and giving notice of the dishonor of bills of exchange, bank checks and promissory notes, be treated and considered as the first day of the week commonly called Sunday and a public holiday, and all such bills, checks and notes otherwise presentable for acceptance and payment on said day, shall be deemed to be presentable for acceptance and payment as is provided by law for the payment of bills, checks, notes and otherwise due on the first day of the week called Sunday or a public holiday, and said 12th day of October, 1892, shall be considered as the first day of the week commonly called Sunday and as a public holiday for all purposes whatsoever in respect to the transaction of business in the public offices of the counties of this State.

§ 2. This act shall take effect immediately.

The committee named by the mayor was thoroughly representative, and elected the following executive board:

*Chairman*, Hugh J. Grant, mayor.

*Secretary*, Charles G. F. Wahle, Jr.

*Treasurer*, J. Edward Simmons.

*Vice-Presidents*, Horace Porter, Cornelius Vanderbilt, Samuel D. Babcock, Charles Barsotti, Martin T. McMahon, Abraham Mead.

*Auditing Committee*, George J. Gould, John H. Starin, David Banks.

The Board of General Managers, as directed by section 6 of chapter 236, Laws of 1892, gave to the committee $10,000 for the benefit of the celebration, and in addition provided for the official representation of its own members, those of the Judicial District Commissions and of the Board of Women Managers.

The celebration week was ushered in by the balmiest of autumn skies, and throughout the long and varied programme not an accident occurred, not a hitch arose to mar the splendid beauty of the land and water pageants.

OFFICIAL PROGRAMME OF THE COLUMBIAN CELEBRATION.

Monday, October 10, 1892:

9 A. M. Opening of the art exhibition at the National Academy of Design.

10:30 A. M. School and college parade.

8 P. M. At Carnegie Music Hall, a musical allegory, "The Triumph of Columbus."

8:30 P. M. Fireworks from Brooklyn bridge.

Tuesday, October 11:

12:30 P. M. Naval parade.

8 P. M. Parade of united Catholic societies.

8 P. M. Catholic celebration at Carnegie Music Hall.

8 P. M. Cantata, "Columbus," by the German singing societies at Seventh Regiment Armory.

8:30 P. M. Fireworks from Brooklyn bridge.

Wednesday, October 12:

10 A. M. Military and civic parade.

4 P. M. Unveiling of Columbus monument at Eighth avenue and Fifty-ninth street.

8 P. M. Night pageant with allegorical floats and fireworks illumination.

Thursday, October 13:

8 P. M. Public banquet at Lenox Lyceum.

A volume in itself might be taken for a detailed description of the festival week, but only the barest outline of the chief events can be given here. The particular feature of Monday's programme was the

SECOND JUDICIAL DISTRICT COMMISSION

school children's parade. From the public schools, private schools, colleges and universities of the city and vicinity trooped the future rulers of the metropolis, marshalled by their teachers and superintendents and led by the mayor himself. Full 30,000 in number, of every nationality and creed, of every condition in life, the youthful host marched past the reviewing stand in Madison square, living evidences of the force and beneficence of the civil and religious liberty of the land discovered by the hero whose fame they celebrated. Other more showy parades there were, but none which struck deeper into the sensibilities of the spectators than this array of growing minds.

Tuesday's great event, which drew unnumbered thousands to the shores of the bay and river, was the naval parade. The vessels swung into line below the Narrows, and as they came up between the Staten and Long Island shores salute after salute was fired which were returned by the forts on either side. Spreading out into the broad bay, the war vessels of four nations led the flotilla; of Italy, the birthplace and home of the humble Genoese sailor; of Spain, the land of his adoption and the patron of his enterprise; of America, his discovered land and the mightiest champion of the freedom and progress he died for; and of France, America's ancient ally in the struggle for constitutional liberty. In their convoy came the merchant vessels of all nations gaily dressed in the colors of their native land, mingled with those of America. Yachts and pleasure boats trimmed from hull to masthead darted in and about the moving mass adding life and color to the scene. As the fleet rounded Bedloe's Island under the shadow of the statue of Liberty and stood up the broad Hudson glittering in the rays of the soft October sun, it formed a sight bewildering in its quiet beauty and never to be forgotten by those so fortunate as to view it.

The war vessels dropped anchor off Riverside Park, and the other vessels rounding to and passing in review slowly dispersed. The parade reflected the highest credit on the executive ability of its grand admiral, Commodore S. Nicholson Kane of the New York Yacht Club, and his able staff.

The military parade of the following day, if less effective in beauty, was equally successful and impressive. A conservative estimate placed the number in line at 70,000. General Martin T. McMahon was the grand marshal and Troop A acted as his escort. In the right of line came the United States regulars, including the West Point cadets, followed by the marines from the war ships in the harbor. Then came in

order the National Guard of New York, Pennsylvania, New Jersey and Connecticut; the Gate City Guard of Atlanta, the Grand Army of the Republic, the firemen, and hundreds of civic and military societies. The procession was reviewed at Madison square by Vice-President Morton and Governor Flower, and the time occupied in passing the reviewing stand was five hours and thirty minutes. President Harrison was unfortunately detained in Washington by the fatal sickness of his wife.

The night pageant had the added effect of mystery and weird fantasy, and formed an enjoyable contrast to the pleasures of the day. Scores of allegorical floats, radiant in color, artistic and essentially original in design, passed along the line of march escorted by the jovial cohorts of Momus. Together, they formed a spectacle rarely seen in a northern city, rivaling in effect the famous Mardi Gras. The fireworks from Brooklyn bridge were a fitting close to each day's programme, and were viewed from that ideal stage by thousands assembled along the wharves and on the shipping in the harbor.

The festivities of the week were ended Thursday evening, October thirteenth, by a banquet given at Lenox Lyceum. Over 400 persons were present, prominent among whom were Vice-President Morton, ex-Presidents Hayes and Cleveland, Governor Flower, a majority of the Cabinet officers, several visiting Governors, municipal, legislative and church dignitaries from New York, Brooklyn and Chicago. The week was a memorable one, for it introduced the first Columbian celebration on a scale so grand as to fittingly celebrate the achievements of the great discoverer, and to worthily usher in the fetes attendant on the exposition.

### THE DEDICATORY CELEBRATION IN CHICAGO, OCTOBER 19–21, 1892.

In the week following the New York celebration came the national exercises at Chicago, when the buildings and grounds were tendered to the National Commission by the exposition authorities and formally accepted and dedicated to their use. It devolved on the Board of General Managers to provide transportation, accommodation and maintenance for all the official representatives of the State during dedication week in Chicago, and to arrange and conduct the dedicatory exercises of the New York State Building. The aim of the board in all these matters was directed to the maintenance of the dignity of the State and to the proper assertion of the place it occupies among its

sister Commonwealths. To do less would have been to receive and merit the censure of all citizens who take pride in the Empire State, and who desire to have her make to all the world a fitting demonstration of her rank and power.

As in New York, civic parades, fireworks, etc., were held previous to the anniversary. On October twenty-first, the corrected date of the discovery, a grand military parade proceeded to the Manufactures Building in Jackson Park, where the ceremonies were held. The scope of this report excludes an account of the national celebration, even though space permitted it. Grand and successful as it was in every detail, New York's part is all that can properly claim our attention.

In the civic parade of October twentieth, no more hearty greetings were bestowed on any State's representatives than on Governor Flower and the New York delegation as they rode past the cheering thousands. In the military parade of the twenty-first, the Governor and his staff were escorted by Troop A, New York's famous cavalry company, and presented a distinct and attractive feature in the line of march. And within the vast Manufactures Building, where a human sea of 120,000 people were assembled, Vice-President Levi P. Morton, of New York, presided over the literary exercises of the day, while another of New York's sons, Chauncey M. Depew, delivered the Columbian oration. At the banquets, receptions and public ceremonies New York was Chicago's honored guest, and if there remained in one stubborn breast even a remnant of previous distrust, it melted under the glowing pride in a national success to which each was a co-contributor.

## DEDICATION OF NEW YORK'S BUILDING.

On Saturday, October twenty-second, many of the States dedicated their official residences at the fair, New York among the number. Although the contract for erecting the building had not been signed till June third, such rapid work had been done in the four and one-half months that the house was sufficiently completed to accommodate the New York delegation and the large number of invited guests assembled. Governor Flower, his staff, the Board of Managers, and the Exposition dignitaries were escorted in carriages from the city to the park by Troop A, while the remainder of the delegation came down by special train. The exercises were held in the banquet hall, which was handsomely trimmed and decorated for the occasion. The best talent in the State had been called into requisition for the ceremonies, and so

gracefully and appropriately were all things done and said, that this record would not be complete without their preservation.

PROGRAMME OF CEREMONIES OF DEDICATION OF NEW YORK STATE BUILDING, OCTOBER 22, 1892.

Music..... Orchestra.
Music..... Quartet.
Prayer.....Rev. Simon J. McPherson, D. D., Second Presbyterian Church, Chicago.
Formal assignment of building to Exposition uses.....Hon. Chauncey M. Depew, president of the Board of General Managers of the exhibit of the State of New York.
Acceptance of building on behalf of Exposition authorities..... Hon. George R. Davis, director-general.
Music..... Orchestra.
Address....Hon. Roswell P. Flower, Governor of the State of New York.
Address.....His Grace, the Archbishop of the State of New York.
Music..... Quartet.
Dedication poem..... Wm. H. McElroy.
Music..... Orchestra.

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Vocal music by the Imperial quartet.
Instrumental music by Sousa's New Marine Band.

PRAYER BY THE REV. SIMON J. MCPHERSON, D. D.

Oh most merciful Father, our heavenly Father, thou who art the fountain of life, thou who art light and love and power, our fathers' God, the Father of the spirits of all flesh, we reverently adore and worship thee. We praise thee for thy gifts in providence so large and kind. We bless thee still more earnestly for thy richer gifts in grace, as revealed in thy Son, who is the hope and prophet of our possibilities. We praise thee, our Father, amidst these symbols of joy, on this day of high dedication, especially for the secure past which thou hast given to us for our country. We desire humbly to record our thanksgiving to God, and we implore thee that thy care may render the future as secure as the past. We uplift our faces and hearts to thee to-day, for thy favors to the great State whose representatives are here now, and whose people are turning their eyes and thoughts with good will hitherward. We humbly thank thee, our Father, for thy favors during many years past, to this one of the sisterhood of States. Make her leaders in the future, we beseech thee, benignant and beneficent. We devoutly bless thee for all the achievements of men within her borders, for all their victories of the

LEVI P. MORTON, Vice-President of the United States

past and for their mastery over nature; and we thank thee most of all for her people, for those who in quiet ways and sheltered homes are recognizing thee.

We beseech thee that in this sisterhood of States, symbolized by these adjacent buildings, there may be sympathy, affection, and a common purpose, which God shall give as he lights the way. Bless us in our representative capacity, and may we in the days to come, immediately and in the future, be blessed as a nation, and may this State be blessed as one of the many, the leader among her equals, for the sake of Jesus Christ. Amen.

ADDRESS BY THE HON. CHAUNCEY M. DEPEW, AS PRESIDENT OF THE STATE BOARD OF WORLD'S FAIR COMMISSIONERS, AT THE DEDICATION OF THE NEW YORK STATE BUILDING AT CHICAGO, OCTOBER 22, 1892.

Florence of the middle ages, in the splendor of her art, the extent of her learning, the spread of her commerce, and the liberty of her citizens, was the electric light which illumed a century that had been shrouded in intellectual and spiritual darkness. The enterprise of her merchants, and the audacity of her sailors had penetrated so far beyond what was known of the surface of the earth as to indicate vague possibilities across the seas. Florence of the Medici created the conditions which made possible Columbus. It is eminently fitting that New York in selecting the model for her building at this great exhibition should have looked to Florence for her lesson, and that her structure should furnish the best ideals of the Renaissance.

New York stands to the American continent in much the same position as did Florence to Europe in the fifteenth century, only her leadership is more difficult and more constantly contested. It was not very hard to be first when there was such general prevalence of ignorance, superstition and despotism. But in our republic culture and learning, commercial activities and all which constitute the pride of cities and the power of states, are so universally distributed among Commonwealths which form our nation, that to be the leader among such splendid examples of progress and development is, indeed, a rare distinction. Our metropolis is the center of the intellectual, the artistic, the financial and industrial activities of the new world. Our State justifies her imperial title by continuing to be greatest in population, in manufactures, in agriculture and in commerce. We have already shown our appreciation of the great discovery and the discoverer by the splendid pageant which filled our harbor and our streets during the past week. The parade of the school children illustrated the equal blessings of civil and religious liberty. It demonstrated the cordiality of

our hospitality to the exile from foreign lands, and the absorbing and assimilating power of our institutions. The Jew and the Gentile, the Catholic and the Protestant of every shade of creed, the atheist and the infidel, the agnostic and the pagan, receiving a free education from the State, marching under the same flag, keeping step to the same music, the flag of the republic and the music of the Union, exhibited the beneficial influences of American liberty. They were prophetic of the perpetuity of institutions founded upon just and equal laws. They revealed that marvelous process by which the raw material of Europe, when placed in the crucible of American liberty, develops patriotism and intelligent citizenship.

The greatest steamships of commerce and the armored battle ships of the new navy, as they proudly ploughed through our harbor and the Hudson, and saluted with salvos of artillery the memory of the discoverer, demonstrated the advance in navigation, commerce and invention since 1492. Their greater significance was that the finding of the new world had emancipated the mind and conscience of man. But the national salute from the frigates of Italy and Spain to the American flag was a recognition of the historic fact that the people of the great republic had utilized for their own happiness, and the benefit of the world, the inestimable advantages of the new continent. The naval, the military, the civic and the allegorical processions, told the story in object lessons of the evolution of modern civilization through the success of the little fleet of Christopher Columbus. The million or more of happy, contented and prosperous men, women and children who viewed the parade of the citizen soldiery, mingled with their pride in this suggestive exhibition of our resources for war, a deep and lasting gratitude for the peaceful event to which the day was dedicated.

There will be a gathering during the next year in this beautiful park of the citizens of every State of our Union, the representatives of the sister republics of North and South America and of the Dominion of Canada, and visitors from all the nations of the globe. Some will find here hospitality in their national structures. Others, whose countries have no houses, will be homeless. The New Yorker, coming from any part of our State, or attracted from abroad to this spot, as he passes the portals of this building, will recognize the infinite hospitality which characterizes the Commonwealth of his birth or adoption, and will also feel in these appointments, surroundings and the friends gathered here that, though far from his residence, he is at home.

Through her Governor and State officers, through the commission appointed by our Legislature to see that our State was properly repre-

sented at this great exposition, we open this building and place it under the administration of the officers of the World's Fair. We believe that New Yorkers will recognize in its architecture and appointments something worthy of their State, and foreigners will have their attention called to the marvelous growth of our great Commonwealth. Should the European ask for a condensation in statement or in picture of the benefits of the discovery of America, and the resultant and greater benefits of the declaration of American independence, we would take him through this building. We would say to him: "This structure represents but one of the forty-four States of the American Union." New York contributes every year more for the education of her people, more in charity and benevolence for the relief of the helpless, the injured and the maimed, has greater facilities for the transportation of her citizens and her products, is further advanced in the arts, in the sciences and in the inventions, possesses greater wealth, more extensive and valuable commerce, could raise and put into the field a more efficient army, and upon the seas a more powerful navy, than all Europe could have done at the time Columbus sailed from Palos.

When Abelard, that brilliant teacher and unfortunate genius of the dark ages, began to teach, thousands of students from every country gathered about him. They were eager to learn and to know the truths which had so long been denied them. Here, on the shores of this great lake, within this inclosure, and in these mammoth buildings will be an international university. Peoples of all the earth will flock to it, and its teachings will be felt for all the time to come in every corner of the globe. It will instruct the American first of all in the greatness, the glory, the productiveness and the possibilities of his own country; but it will teach him also the needed lesson that other nations possess their own peculiar excellencies and have also made great advances in the arts and liberty.

As each race presents here its developed resources and shows in what respect it may be superior to all others, the sum of human perfection gathered from many countries will become the common property of all the world. By the glorious memory of Peter Stuyvesant and his successors in the gubernatorial office, by the cosmopolitan spirit of our city, by the broad hospitality of our State which has always welcomed the immigrant, educated him to our standard and conferred upon him our citizenship, and on behalf of my associates in the commission, I give this building to the uses of the fair during its existence. Afterward I trust it may be the dwelling place of our New York spirit as the club of our people who have settled in the West.

ADDRESS OF MAJOR M. P. HANDY, IN PLACE OF THE DIRECTOR-GENERAL, ON BEHALF OF THE NATIONAL COMMITTEE.

*Governor Flower, Ladies and Gentlemen:*

You can regret no more sincerely than do I that the director-general of the World's Columbian Exposition is not here in person to present his homage to the great State of New York, and to present his congratulations and felicitations to the sons of New York upon the event which has brought us together.

Summoned at a half an hour's notice to discharge this duty in his name, you will hardly expect me to say more than to discharge simply the duty that has been assigned me. New York has always been at the front, and certainly not on this day of all days would any State of the Union or any citizens of the United States ask her to take anything but the frontest of front seats. New York was thought at one time a little slow in coming to the rescue of the World's Fair, but there were those, and they were many in this city and throughout the country (and among them none more conspicious than the director-general in whose name I now appear), there were those, I say, who knew that it was only a question of time. That imperial State has a habit of doing in her own imperial and imperious way, and if she followed her own sweet, imperious will in this matter, we have no right to complain, provided she got there at last. It has been known to those who have been in the councils of the exposition from the first that to New York and to many other States we are indebted for much that is noble in our work. It was to the brilliant brain of a New Yorker that we are indebted for the plan which shall make these exposition grounds most notable in the future for their landscape beauty. When the buildings were to be constructed, we went to New York and selected architects for four of the buildings which to-day you admire so much, and which shall remain for all time, if not in form, in the history of the exposition, as a monument to what New York architects can do. In the councils of the exposition from the first New York has been potent through the members of her National Commission. Yesterday in the ceremonies which we will all remember to our last days, a New Yorker was most conspicuous, a gifted and able son of New York, because by reason of his high estate he took a most prominent position, and it was his voice that, under the most trying conditions that ever faced an orator, dedicated these grounds and these buildings to the good of humanity. When the grand procession passed through the streets of our city no man was received by the populace with more applause than the excellent son of New York, her chief executive.

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So New York from the first has been to the front, and if the ceremonies of this week are to be remembered more for one thing than for another, it will be from the fact that the marvelous orator from New York raised his voice to the delivery of the Columbian oration. Mr. President, Gov. Flower, Ladies, Gentlemen, my duties are very slight. The director-general regrets extremely his inability to be here. Nothing but an important summons from a national body of which he is an officer would have prevented him from taking his part in the programme.

In his name, by his authority, I have the honor to accept this beautiful building on behalf of the exposition company; and in the name of Chicago, of the exposition company, of the National Commission, I promise co-operation to the fullest extent in keeping it inviolate to the great purpose to which it is to be devoted.

### ADDRESS OF GOV. ROSWELL P. FLOWER.

*Mr. Chairman, and Fellow-citizens of New York and Illinois:*

On behalf of the citizens of New York, I am here to-day, with other civil and military officers of our State, to give formal expression to the interest which our people feel in this national undertaking, and to dedicate the beautiful structure which her munificence has contributed to the architecture of this exposition.

I consider it a proud honor that, as Executive of the greatest State in the Union, I am permitted at this Columbian anniversary to bear her message of greeting and good-speed to the promoters of so praiseworthy a national celebration. As chief participant among the States in the material and intellectual advantages which Columbus' discovery gave to civilization, New York should be, and is, the gladdest participant in this exhibition of the New World's marvelous growth and development during four centuries. So interested was she in its success that she struggled hard for permission to hold the exposition within the borders of her own territory, but, though she failed in that, her interest is none the less intense, and, with the unselfishness of true patriotism, she is joining hands with Illinois in a noble endeavor by this undertaking to promote the glory and prosperity of our common country. We trust that the representation which her government and her citizens will have upon these grounds will vividly illustrate the story of New York's proud growth and add new lustre to her recognized supremacy.

The earliest settlement by white men, within the limits of what is now the State of New York, was a trading post at the southern end of Manhattan Island. From that beginning has grown the greatest city of the continent, and the site of the first rude log cabin, built by adventurous

Hollanders, is to-day the very kernel of the commercial metropolis of the Union. The center of population in New York city has moved far up the island, and the splendid emporiums of its local trade are invading districts, where, in the memory of men still living, the sportsman went to seek for quail and woodcock. But for the metropolitan district — the greater New York — the center alike of population and of commercial activity remains at this hour where that bold Amsterdam skipper, Captain Adrian Block, placed it 279 years ago.

What the lower end of Manhattan Island is to the 3,000,000 of people living around it, that the State and city of New York are in a certain degree to the people of the United States. With each successive census the center of population of the Union has been shown to have shifted westward along the thirty-ninth parallel from the seventy-sixth to the eighty-fifth degree of longitude. It was eighteen miles west of Baltimore in 1800, and it is found to be twenty miles east of Columbus, Ind., in 1890. But the heart that keeps the life blood of commerce circulating through the veins and arteries of this great republic is where it was when the years of American progress were few, and where it will be when they are counted by centuries.

New York owes much to the development of the great West, but that development also owes much to New York. When the American colonies were a fringe of sparsely peopled communities stretched along the Atlantic seaboard, there were provinces for which a greater future might have been predicted than for New York, and cities that bade fair to lead in the race for wealth the bustling port on the Hudson. But when the colonies had become self-governing States, and the tide of migration began to pass beyond the mountain barrier and overflow into the valley of the Mississippi, the future greatness of New York was assured. For here was a new domain, broad as the continent of the older world, and far more fertile, to which New York supplied both entrance and outlet, and with whose growth in wealth and population its own were bound to grow. Henceforth the rank of New York among American Commonwealths was as little doubtful as that of the parent seat of its trade among American cities.

New York was formed by nature to be the Empire State of the Union. The ocean tides that sweep from the Atlantic into the noblest of American harbors are felt deep in the heart of the State. The sea has cleft the backbone of the continent for a path for the commerce of New York, and the level sweep of the western prairies broadens out from the valley of the Mohawk. In war and in peace our State has held the gateway of the continent. It was so when the red man owned the soil, and when the

Iroquois confederacy dictated to subject tribes from the lakes to the gulf; it will be so when the net-work of the roads of commerce by land and water are to those of our time as ours are to those of the stage coach and the pack mule.

As Henry Hudson sailed up the noble stream that the aborigines called "the river of the mountains," he thought that here, indeed, must be the strait between two oceans, the long sought for northwest passage to India. But though he found "as beautiful a land as the foot of man can tread on," he little dreamed that this was the passage to an empire which had in store for coming generations riches beyond the treasure of far Cathay. It took more than a century for men to grasp the significance of the discovery of Columbus, and it was another two centuries before it was fairly dedicated to its destined use. For this virgin continent, that the navigators of Europe had stumbled on in their search for a short cut to Asia, had a larger part to play in the drama of human history than to be merely a new battle ground for old world quarrels, and a new sphere of ambition for old world dynasties. It had been reserved through all the ages to give man a new opportunity to show that he is worthy to be free, and to enable him to work out on the grandest scale in history a scheme of liberty, combined with order, which should stand as an example and an encouragement to all the world beside. Time has verified with marvelous accuracy the prediction of the Irish poet, recorded about 150 years ago, and familiar now to every school boy:

"Westward the course of empire takes its way;
The four first acts already past,
A fifth shall close the drama with the day;
Time's noblest offspring is the last."

In this great enterprise New York has nobly borne her share. The protest of her provincial Legislature against the stamp act is recorded to have breathed a spirit more bold and decided than that from any other colony. It was within her borders that the first scheme of colonial union was formulated, and there also assembled the first provincial Congress to prepare the ground for the fair edifice of American liberty. The first State Constitution of New York has been universally accorded the very highest rank among the written instruments of human freedom. Her share in the making of the Federal Constitution was no less important than honorable, and the stand which she took to defend the sovereign rights of the smaller States against influences that would have given the States of her own rank an overmastering influence over the general government, has been, with justice, called the noblest passage in her history.

Toleration and comprehensiveness have been stamped on the administration of public affairs in New York from the earliest period, and history has fairly given her credit for these. But the credit she deserves for a magnanimous disinterestedness is neither so freely admitted nor so well understood. It is not alone in the records of the Constitutional Convention, or in the part she bore in the struggle which preceded it, that the evidence of this is to be found. In conceiving and executing what was then regarded as the gigantic project of uniting Lake Erie and Lake Champlain with the Hudson river, New York conferred on the whole country a benefit whose value has never been fully estimated, and one not to be offset by any immediate gain to herself.

At the present day the construction of the Erie canal has ceased to be a marvel, but at the time of its commencement, seventy-five years ago, it stood as the greatest public enterprise of modern history. It was a work of national, nay of international importance, and its magnitude challenged the attention of the world. Yet it was undertaken, singly and unaided, by a State whose finances had barely recovered from the effects of a war which had increased the burden of her debt and paralyzed her commerce, and whose entire population was less than that of the city of Chicago to-day. At the celebration of the completion in 1825 of this great undertaking, Philip Hone, the mayor of New York city, reminded his hearers, in a strain of pardonable pride and exultation, that this was exclusively a State work. He said: "In its infancy its feeble hands were in vain extended to the general government for aid and support, and the State of New York, unaided, unsupported, and relying only upon its own energies and the patriotism of its own citizens, began with zeal, prosecuted with spirit, and has now successfully completed an enterprise which seemed to require the power and the resources of an empire to accomplish."

New York, doubtless, had her reward, but it was because in uniting the great lakes with the Atlantic she was doing a much greater service to the country at large than could be measured by any immediate gain to herself. "Now," said the men of that day, "the time is near at hand when the minerals of the mountains and the rich products of a fertile soil, 'where prowls the wolf and the huntsman roves,' will jointly increase domestic and foreign commerce, and pour wealth into the lap of industry." "Hereafter our wheat will compete in the European markets with that of Poland and Odessa, and a commerce be established important to the merchant and beneficial to the agriculturist." Or, rising to a higher elevation, they found matter for congratulation in the fact that "the canal removes the cloud which hung over our interminable forests; and the philanthropist and patriot are no longer pained with the idea of the greater portion of our

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empire containing seignories of wild beasts, or coverts for banditta and a refuge for criminals." Or still more sweeping in its flight and penetrating in its vision was the oratory which discerned in the Great Western canal a stronger tie than that of a national compact, and which hailed it as destined to secure and consolidate forever the union of these States. "Thus," in the words of William Bayard, of New York, "our republican institutions will be preserved, the example of a representative government founded on the people's will, be maintained in its pristine purity, and the once fond wish of the patriot be realized, in the unsullied perpetuity of our Constitution."

When the Erie canal was constructed, the agriculture of New York was flourishing, and her western counties were still but partially redeemed from the virgin forest. The canal rendered possible and profitable the settlement of the valley of the Ohio, and the process of Western competition, which was then begun, has ended by making it unprofitable to pursue the course of crops and husbandry on which New Yorkers throve sixty years ago. Nevertheless, we shall be able to demonstrate to the world at this Columbian Exposition that our agricultural products are greater in quantity and more varied in kind than those of any other State in the Union. New York is preparing a display of cereals whose quality will challenge comparison with any ; it has over a hundred varieties of grasses to place on exhibition, and its hops, tobacco, hemp and flax will make to every intelligent observer a most impressive show. It will contribute its full share to the live stock exhibit, and its dairy products will be presented on a scale commensurate with their magnitude and excellence ; the sugars, the syrups, the honey, contributed by the State, will not lack adequate representation. The exposition will be plentifully embellished by the most beautiful specimens of its gardeners' art, and the enormous proportions and value of its fruit culture will be made plain to the dullest apprehension. It is not generally known that, leaving out the fruits of Florida and California, the orchards of the State produce more than those of all the other States combined, and that in money value to the grower the grape crop of California must yield to that of New York. Even the nutritious and fortifying bean, from whose consumption a neighboring Commonwealth is supposed to derive so much of its characteristic mental and physical activity, is peculiarly a New York product, two or three counties of our State growing as much of it as all the rest of the country together.

I venture to hope that the striking exhibit that will be made of our diversified agriculture will not be lost on those New York farmers who have not learned how easy it is to escape the ruinous competition of the

West in the great food staples, by adapting themselves to the demands of domestic markets that the State has within its own borders. There was a time, which some of us may live to see again, when the wheat and corn-fields of New York yielded a good living to those who cultivated them. But for the last quarter of a century it has been up-hill work for grain farms in New York to make both ends meet. Among the lessons which the department of agriculture at this great exposition can yield to those who bring any intelligence to the study of what it will have to show, not the least valuable will be that which demonstrates in how many ways much of the soil of New York can be made to give a better return for the labor bestowed on it than it does now.

The rock formation of the State is a complete epitome of that of the whole country below the coal measures, and its geological exhibit will be, perhaps, the most striking of any which will be seen in the Hall of Mines. New York has the only fluid saline deposit in America, and the salt crystals of Herkimer county will make an appropriate centerpiece for the mineral exhibit of the State. We have iron and lead, granite and marble, slate, gypsum and marl, to place in the commercial category of our mineral resources, and one of the best equipped State museums in the country, from which to draw specimens of scientific interest. The forest products of the State will be shown as they have never been before. Short as has been the time available for the preparation of these characteristic exhibits of the material greatness of the State, they will be found to show no marks of haste and to be above the reproach of scantiness.

Representing ten per cent of the population of the United States, sixteen per cent of the assessed valuation of their property, and probably twenty per cent of their actual wealth, New York may be fairly expected to have in the great buildings before us, commercial exhibits worthy of her place in the Union. When the doors of the World's Columbian Exposition are thrown open next May, this expectation will be found to be fully verified. The number of her individual exhibitors is likely to exceed 2,000, and the range of the products which they will show is as broad as the industries of the United States. In New York city we have the greatest manufacturing community in the country ; and if the circle be enlarged so as to include the wide area of the metropolitan district, we have, within a radius of twelve miles from the City Hall of New York, an aggregation of productive effort which for variety and value can hardly be matched in the world. This will have its due representation in the appropriate departments here, and though the contributions of this great hive of industry cannot be grouped together according to their place of

origin, the records of the fair can hardly fail to bear eloquent testimony to the energy, enterprise and skill of the metropolis of workers that surrounds the harbor of New York.

Art and literature have yielded in all ages to the attracting force of great cities, and our time shows but few exceptions to the rule. New York is the chosen home of American art; beyond its limits the accepted representatives of native painting and sculpture are comparatively few. Of the 34,000 square feet of wall space reserved in the Art Palace for the pictures of the United States painted in the last sixteen years, the larger portion will, therefore, be occupied by the work of New York artists. No more valuable exhibits than these will be intrusted to the care of the exposition authorities, and none with which the prompting of mere commercial profit will have less to do. The State recognizes the fact that its own credit demands an adequate presentation of the fine arts nourished within its borders, and its assistance has been freely given to provide for the safe transportation of works that, in many cases, represent the sole possessions of their makers.

Equally imperative has been the obligation of the State to be adequately represented in the educational exhibit of the exposition. Our public school system was one of the first established in the Union, and we believe that there is no more congruously developed system in the country to-day. It is a great work, this of showing the whole field of scholastic education from the lowest primary grade to the academy, the normal school and the college, of illustrating the methods that prevail in it, and of preparing specimens of what it yields. The mere collection and arrangement of samples of the work of pupils from all parts of New York is a task of uncommon magnitude, and is one that can only be done by those wielding the delegated authority of the State. But it has been committed to capable hands; and I do not think that in this sphere of civic effort New York will have any cause to blush for the results of comparison with her neighbors in the department of liberal arts.

The University of the State of New York, an agency for the promotion of higher education, without a counterpart in any other State of the Union, will make a comprehensive showing of its mode of operation. The leading colleges of the State will have independent exhibits of a kind inferior to none of their associates in the work of academic culture. Our chief technical schools, our institutions for the education of the blind, and the deaf and dumb, as well as the reformatories of the State, will have proper representation here. So will the great public hospitals and asylums, those monuments of private beneficence and State and municipal charity, which are not the least of the glories of New York.

We shall be able to point to this building in which you are assembled as New York's most beautiful exhibit. I count it a pride and privilege to dedicate, as I do now by the prerogative of my office, this fair structure to the reception and convenience of New Yorkers visiting the fair, and to the entertainment of all to whom the State may extend its hospitality. The plan of this building down to the minutest detail of its lavish ornamentation is a birth of the same time, an outcome of the same spirit that sent Columbus on his voyage, and enlarged no less the scope of human intelligence than the boundaries of the habitable globe. It belongs to the period of the new birth of learning and of art, when the torpor of centuries was thrown off and the history of modern civilization began. In the republics of Italy, whose merchants were princes, palaces, of which this is the similitude, were built while Columbus was brooding over his enterprise of wresting its secret from the western sea. In such abodes did men live whose wealth was fed by countless rills of peaceful traffic from three continents, and in such were luxury and display tempered by a discriminating taste in art, and by a sense of the obligations of a stirring and elevating public life. Our State building stands for some of the noblest ideals that commerce ever fostered or civic pride ever maintained, and it is, therefore, a most fitting representation of the visible presence of New York at the approaching congress of nations.

To that gathering New York will come, bringing the best she has, whether of the bounty of nature or the art of man. In the pride with which the whole country may justly regard the greatest, the most comprehensive and the most impressive of all international exhibitions, New York will fully participate. The lustre which the World's Fair will shed upon the city by whose energy and enterprise it has been promoted, New York will do her utmost to enhance. There will be neither East nor West, North nor South in this magnificent display of the gathered fruits of human progress at the close of the nineteenth century. Neither sectional nor municipal jealousy can have a place in a celebration whose grandeur all the world is helping to swell, and in which all the world will participate. A generous rivalry can alone have place in our people's effort to show that they have not been unfaithful to the responsibilities laid upon them, and that they have not been careless stewards of the heritage which, through the centuries, was prepared for the great republic of the west.

WALTER V. KERNAN, SEC'Y.
COL JOHN F GAYNOR
PRES.
GEORGE B. SLOAN
TREAS.

## ADDRESS OF HIS GRACE, THE MOST REVEREND M. A. CORRIGAN, D. D., ARCHBISHOP OF NEW YORK.

*Your Excellency, Ladies and Gentlemen :*

Four hundred years ago, Columbus, sailing in the soft southern seas of the Bahamas, first touched the soil of the New World. Day by day, afterwards, as in that limpid atmosphere, amid the luxuriant verdure of the tropics, new beauties captivated his admiring gaze, his enthusiasm rose higher and higher, and he marveled how any one, who once visited that charming spot, could tear himself away from such an earthly paradise. Thus, in his diary for the 21st of October, 1492, he says : "All these objects fill me with astonishment and admiration, and seem as if they ought to retain in this abode every man who has once beheld them." Fascinating as was that scene of loveliness, could his eyes scan America to-day, resplendent with the best products of human industry, and teeming with inexhaustible resources, could he witness the rich results of his discovery, with all their untold future development superadded, his soul, thrilling with ecstatic pride, could not contain its unbounded gratitude to God. To us it is given to behold, in its full splendor, what Columbus, like another Moses on the borders of the land of promise, could only discern in dim and distant outline. And, therefore, appreciating this fact, with Italy, the land of his birth, with Spain, the land of his adoption, with the other nations of the globe, who are debtors to his daring, we gladly swell the universal chorus in his honor, of praise and of thanksgiving.

To-day everything combines to make this quadri-centennial celebration peculiarly appropriate. Obstacles that existed a hundred years ago have happily disappeared. A century ago the ocean separated us by a journey of seventy days from Europe ; our self-government, whose unparalleled success has since electrified the world, was looked upon as a problem of uncertain solution ; at home facilities of travel and of intercommunication were yet to be provided. More than this, the disparaging innuendoes, the base as well as baseless charges, against the fair fame of Columbus, had not yet been removed by patient historical research and critical acumen. Fortunately these clouds have since been almost entirely dispelled, thanks especially to the initiative of a son of our Empire State — the immortal Washington Irving. But most of all, the name and the fame of Columbus, and the story of his life will be proclaimed throughout the world by the proceedings solemnly inaugurated yesterday, and to continue and culminate in the exposition to be held in this phenomenal and typical American city. Coming from abroad to Chicago, the visitor will be puzzled which most to admire, the magnificence of the World's Fair

buildings, with the bewildering display of American ingenuity, or the no less impressive public spirit that called them into being. In either case he will pay a tribute to the genius of the country in which patriotism knows no distinction of race or of creed, in which popular intelligence is diffused as the sunshine, and the blessings of education are open to all like the air we breathe, while the lesson of Columbus' life is taught by every day's experience, that honest toil and perseverance, and the patient abiding by one's convictions, when founded on reason and in truth, will infallibly reap their rich reward.

In the limited time placed at my disposal I can invite your attention to two points only in the character of Columbus. Judging him from the standpoint of the fifteenth century, which is undoubtedly the true philosophic standard, I beg to present him as a man of science, and a man of faith.

As a scientist, considering the times in which he lived, he eminently deserves our respect. Both in theory and in practice he was one of the best geographers and cosmographers of the age. According to reliable historians, before he set out to discover new seas, he had navigated the whole extent of those already known. Moreover, he had studied so many authors, and to such advantage, that Alexander von Humboldt — certainly no mean authority — affirms: "When we consider his life, we must feel astonishment at the extent of his literary acquaintance." Again he writes, "at the beginning of a new epoch, on the uncertain border land between the middle ages and modern times, this great figure dominates the age whose impulses he felt, and which he vivified in turn." In another work, Humboldt notes that students in almost every department of science, as physics, geology, anthropology, astronomy, philology and navigation, will *ever* be indebted to Columbus. And he adds, "the majesty of great memories seem to be concentrated in his name. It is the originality of his vast conception, the extent, the fecundity of his genius, the courage opposed to long misfortunes, that have raised the admiral above all his contemporaries."

Again, the scientist appears in this, that in the domain of nature and of positive fact, Columbus took nothing for granted. The persistent opposition of the most erudite professors of the day did not disconcert him. While he bowed reverently to the teachings of faith, he brushed away as cobwebs certain interpretations of Scripture, more fanciful than real, which were alleged against him, and calmly maintained that the word of God cannot be in conflict with scientific truth.

As a scientist again he was conscious of the grandeur and the untold promise of his discovery. He recognized, to use the phrase of Voltaire, that he was "doubling creation." Thus, writing to Ferdinand and Isabella, after his arrest by Bobadilla, he says: "The lands, which here obey

your highnesses, are more extensive and richer than all Christendom put together." In 1500 he wrote to Donna Juana Della Torre, "through the Divine will I have placed already under the dominion of our lords the King and the Queen another world, whereby Spain, that was poor, is now made exceeding rich." His contemporaries often use similar language, speaking explicitly of the "New World," as Harrisse's Columbian Bibliography abundantly demonstrates. A man of such calibre is no mere adventurer, nor a buccaneer. The result of the studies of a lifetime cannot be accounted a simple streak of good luck, or a "sublime blunder."

And now let us consider our hero as exemplifying his name. In the cathedrals of Spain, as you enter the vast portals, you generally find painted on the wall a colossal picture of St. Christopher, at times some thirty feet high, as, for instance, in the cathedral of Seville. For some unexplained reason the old Spaniards were very fond of this subject. Columbus must often have gazed on such representations. At all events, the project of bearing Christ over the waters sank deep into his heart. Time and again he alludes to it as the main object of his researches and the aim of his labors. Other motives of action undoubtedly he had, but they were means to an end. His diary opens with the avowal of his grand purpose. The record of the great discovery is accompanied with a similar declaration, and in various other passages of his journal the same project appears, like a dominant note in music, always present in the composer's mind, even though not always heard. In the account of his third voyage we read: "May our Lord grant your highnesses long life and health and tranquillity in order that they may pursue so noble an enterprise, in which it seems to me that God receives great service, Spain increases its grandeur and all Christians receive much consolation and pleasure, because the name of our Lord shall be spread throughout this country." This statement is corroborated, as is well known, by the declaration contained in the last will of Queen Isabella. Again, can the historian assign any other motive so powerful as this for the deep interest of the prior of La Rabida, of the various Franciscan and Dominican friars, as well as of the great cardinal of Spain, who so earnestly pleaded Columbus' cause before the Spanish sovereigns? Moreover, may we not reasonably assume that the great navigator after all was a willing instrument in the hands of God? Consider the times. The old order was changing. Three great inventions, already beginning to exert a most potent influence, were destined in time to revolutionize the world; the printing press, which led to revival of learning; the use of gunpowder, which changed the methods of warfare; the mariner's compass, which permitted the sailor to tempt boldly even unknown seas. These three great factors of civilization, each in its own way, so

stimulated human thought that the discovery of America was plainly in the designs of that providence which "reacheth from end to end mightily and ordereth all things sweetly." Once more, take God's dealings with the human race, as illustrated in the central fact of all history, the incarnation of his Son. The promise of the Redeemer runs through the Scriptures of the Old Testament as a thread of gold in a tangled web. When all seems most forbidding, the gracious promise is most clearly renewed. For instance, Abraham is told of the wonderful increase of his posterity, when in the order of nature he could not hope for issue; and later on he is bidden to sacrifice Isaac, through whom the promise was to be accomplished. Just as all seems hopelessly lost, an angel stays the father's uplifted arm, and the patriarch receives the divine assurance: "I will multiply thy seed as the stars of heaven and as the sand by the seashore, and in thy seed shall all the nations of the earth be blessed."

So it is time and again in the life of Columbus. All seemed dark and hopeless; for instance, when, after years of weary negotiation, the court finally refused his demands, and he was sorrowfully bidding adieu to Spain forever, Santangel unexpectedly persuades the Queen to yield to his conditions. Later on, when he could not induce a single sailor of Palos to make the fearful venture across the dark ocean, at the last moment Pinzon comes forward and the caravels are speedily equipped. Returning from his first voyage of discovery, in all the glory of his success, a horrible storm overtakes his frail bark. All on board consider destruction imminent. The next morning, to their glad surprise, the sailor on watch at the masthead exclaims: "Land! land!" In fact these unexpected rescues came so often and so regularly in the history of Columbus that we cannot but conclude that the Lord for his own wise purpose was with him, and evidently not for his own sake alone but for ours as well.

And if the Lord had mercy for the sake of the thousands and millions of souls who are to serve him, not only in this glorious republic but throughout the length and breadth of America, may we not reverently repeat the admiral's prayer: "O Lord, eternal and almighty God, who by thy holy word didst create the heavens, the land and the seas, hallowed and glorified be thy name; praised be thy majesty, which has vouchasfed to suffer thy holy name, by the work of thy humble servant, to be made known and proclaimed in this new part of the world." And since we are here to thank God and commemorate his servant, may we not also ask that the blessing which brought Columbus safe through all his journeys may rest on us too, and on this building, and on our beloved State — the blessing of God Almighty, Father, Son and Holy Ghost, to whom be praise and glory forever.

SIXTH JUDICIAL DISTRICT COMMISSION

## DEDICATION POEM: TWO PICTURES.

BY WILLIAM H. MCELROY.

I.

There's a picture the ages shall cherish till time has been shorn of his might,
And dawns the unspeakable morning which never is vanquished by night,
No shrine ever builded by mortals that wonderful picture shall hold,
It shall hang in the Pantheon peerless, that's builded of memory's gold!

At the gate of the Heaven-kissed convent where want never pleaded in vain,
In the beautiful land of the Virgin, the heart of the garden of Spain,
A stranger is timidly knocking who begs, as he humbles his head,
For the child whose hand he is holding, "Good friars, a morsel of bread."

Impoverished, unhonored, unfriended, he wanders a pilgrim forlorn,
His pathway resounds with the laughter and bleeds with the briers of scorn,
So wearied and baffled behold him, an exile, derided, reviled,
As he stands at the gate of the convent, beseeching a crust for his child.

The blessed Franciscans console him, the arms of their love open wide,
They succor with Christ-like compassion the child pressing close to his side,
But the pity they feel for the beggar dies out in o'er-whelming surprise,
As they see that some vision transcending suffuses with rapture his eyes.

Then the prior, soft speaking adjures him, this beggar of mystical mien,
"Thy vision — we pray thee, unfold it; what is it thy spirit has seen?
Thine eyes are beholding a glory — hast climbed where the Law-giver trod?
Has the firmament read thee its riddles, hast stood in the presence of God?"

The beggar smiles calm on the friars, and, moved by their earnest behest,
Slow turns and with infinite yearning looks sadly and long at the west;
Then he answers, "Wouldst know of my vision? Good fathers, I hear and obey —
I've seen it, I seek it, I'll find it, the way leading west to Cathay!

"That vision uplifts and sustains me, it shines with so ardent a glow,
Each mount of despair as it rises is gone, like the sun-smitten snow;
And, lo, the delectable mountains I seem to be treading the while,
Whose summits are crimson for ever with Heaven's ineffable smile."

That picture the ages shall cherish, its colors fade not with the years,
Humanity turns to it fondly and cons it through tenderest tears;
Behold him, the marvelous dreamer, behold him, the jeered and reviled,
As he stands at the gate of the convent, beseeching a crust for his child!

II.

Here, here, where the jubilant nations their sheaves of rejoicing shall bring,
While the continent echoes and echoes the harvest home anthems they sing,
There shall grow on the canvas of Fancy a picture of sunnier hue,
A picture which charms and refreshes like Italy's heaven of blue.

Be its place by the side of the beggar, this figure of matchless renown,
Round his head like a halo are beaming the stars of his Fate-wrested crown,
Still his eyes the old rapture suffuses, a glory outshining the sun,
And his face is the face of the martyr who's fought a good fight and has won.

He shall loom in our glorious pageant, as over the valley arise
The heights of the pinacled Jungfrau which melt in the waves of the skies;
The wide world shall render him homage, shall name him its bravest and best,
As here in his splendid fruition he greets the proud Queen of the West!

And lo, while the plaudits are sounding, a rustle of wings we shall hear,
The curtains of cloud-land shall open, a presence celestial appear;
'Tis the conquering goddess of Progress, descending with ardor aflame,
Columbus her hero of heroes, the first of her knights, she shall name.

With the soul's subtle sight we shall see them, shall hail them each festival day,
They shall saunter from temple to temple approving each brilliant array,
They shall kindle with joy at the treasures heaped high in the garners of Peace,
And yearn for that civilized morrow when Warfare forever shall cease.

Mayhap if we listen attentive, from the hero's own lips we shall hear,
As he talks to the conquering goddess, the tale of his dauntless career.
O epic of courage sublimest, fate left him in darkness to grope,
No pillar, no star gave him guidance, but only the beacon of hope.

And alway and alway the goddess shall beam with a passionate pride,
On her darling whose steps she's attending, serene in his place at her side —
Not fonder the look of the pilgrim, the beggar derided, reviled,
As he turned at the gate of the convent and gazed on the face of his child.

These joy-bedecked scenes shall endure not, the harvest home anthems shall cease,
Too soon at the touch of Time's finger shall vanish this triumph of Peace,

But the music of memory lingers, time threatens her structures in vain,
All castles the ages shall crumble, save the shimmering castles of Spain.

The beggar forlorn at the convent, the ages' invincible knight,
These pictures shall cheer and admonish till time shall be shorn of his might,
And ever to him who regards them, though hope may have mocked him, they'll say,
"Take heart — from the darkness that's thickest, there blossoms the ravishing day!"

III.

O Progress, with thy restless eyes,
Sleepless as fate and tireless as the sun,
Thou mighty mother of the world's emprise,
Here where we bring the trophies thou hast won,
Bend thou thine ear and list to our acclaim,
Stay thy imperial march by land and sea,
While this fair temple, vocal with thy name,
We dedicate to thee!

Whatever shall show mankind
That, spite of history's lying page,
Not buried in the years behind,
But forward lies the golden age;
Whatever here shall worthiest stand,
The boon of ages yet to be,
Best fruitage of the brain and hand,
We dedicate to thee!

Whatever here shall truest teach
How the round world may wiser grow —
The clearer eye, the wider reach,
The rule of Heaven here below;
What'er makes learning's touch so bright,
Or wides the boundaries of the free,
The jewels of our empire's might
We dedicate to thee!

## WORK OF THE WINTER MONTHS 1892–1893.

On the return of the Board of General Managers from the Columbian celebrations, work was taken up by the commissioners and department chiefs with renewed energy. Indeed, it might well be argued that the holding of the dedication six months in advance of the fair was of the highest benefit to the exposition, apart from its historical significance, for the reason that representatives from every State and many foreign nations were present, who freely interchanged views as to the scope and possibilities of the exposition and the nature of the work already undertaken by them. Furthermore, it was readily appreciated by all that the magnificent scale on which the grounds and buildings were planned was the type of the fair, and that to occupy an honorable place in the exhibit departments meant unremitting labor for the remaining six months. It is safe to assert that the exhibits of a majority of the States were doubled in attractiveness by the experience gained and rivalry excited at the early celebration.

The work of the commission during the winter of 1892 and 1893, though pressing and exacting, was necessarily of a certain routine character difficult to transcribe and uninteresting to read. Only a few of the most important actions can be touched upon. The greatest demand upon the time, patience and diplomatic ability of the board was the question of space; many of New York's manufacturing industries demanded an immediate adjustment of the difficulty as a condition of their making an exhibit; others, just waking to a sense of the importance of the occasion, were making frantic endeavors to obtain recognition from the exposition authorities. In their role of mediators the board were obliged to use the utmost tact to satisfy the demands of the exhibitors on the one hand and not make unjust requirements of the exposition officials on the other.

There was undoubtedly a failure to satisfy the great majority of individual demands both as to the amount of space granted and the time consumed in reaching a decision, but the task imposed upon the Chicago authorities was so complicated and delicate as to demand for them the utmost indulgence. Some idea of their problem may be obtained when it is stated that in the Manufactures Building, with a floor area of thirty and three-fifths acres, American exhibitors proposed to occupy space five times greater than at their disposal, and yet no foreign nation received one-third the space reserved for the United

WILLIAM S. KIMBALL
Pres.

HENRY STOWELL
Secy

EDWIN C. COOK

States. In the Machinery Building four times the total available space was applied for by American firms. The difficulty of making, under such circumstances, an allotment which should be at once fair to the individual and not prejudicial to the representative character of the combined exhibit in any given group is sufficiently obvious.

Some business firms of the State sought to advertise and make capital of the notoriety to be gained by airing alleged grievances; some few cases of hardship undoubtedly happened, but in nearly every case as much space as could be expected was granted every applicant, and the allotment to New York as a whole was generous in the extreme. The following table of space * occupied by New York in each department is the most conclusive argument on the question:

| Department. | Space reserved for United States. | Space granted New York. | | |
|---|---|---|---|---|
| Agriculture..... | 450,000 feet | Collective ..... | 4,048 | |
| | | Individual .... | 42,774 | 46,822 feet. |
| Forestry..... | ..... | Collective ..... | 1,053 | |
| | | Individual .... | 1,669 | 2,722 feet. |
| Horticulture† ..... | ..... | Collective ..... | 65,500 | |
| | | Individual..... | 43,654 | 109,154 feet. |
| Fisheries ..... | ..... | ..... | ..... | 1,415 feet. |
| Mines and Mining.. | 140,000 feet | Collective ..... | 1,891 | |
| | | Individual .... | 11,633 | 13,524 feet. |
| Machinery ..... | 100,000 feet | ..... | ..... | 40,224 feet. |
| Transportation .... | ..... | Collective ..... | 2,450 | |
| | | Individual .... | 66,500 | 68,950 feet. |
| Manufactures ..... | 260,000 feet | ..... | ..... | 53,063 feet. |
| Electricity ..... | 180,000 feet | ..... | ..... | 39,298 feet. |
| Fine arts ..... | 36,000 feet | ..... | ..... | 21,000 feet. |
| Liberal arts ..... | 230,000 feet | Collective ..... | 12,810 | |
| | | Individual..... | 33,040 | 45,850 feet. |
| Ethnology ..... | ..... | Collective ..... | 12,800 | |
| | | Individual .... | 18,280 | 31,080 feet. |
| | | | | 473,102 feet. |

This grand total approximates ten and three-quarter acres, or a space

* At the time of going to press the official figures have not been tabulated by the Exposition authorities. These figures are based on newspaper tables and estimates, but are sufficiently correct for making comparisons.

† Not including 92,000 feet on lawns and Wooded Island.

nearly as large as that occupied by the Electricity and Mines and Mining buildings combined. In round numbers the space set aside for the United States at the exposition was 3,000,000 feet, of which New York occupied nearly 500,000, or one-sixth the entire amount. In the Agricultural Building New York had one-tenth of the total space granted American exhibitors; in the Machinery Hall two-fifths; in the Manufactures Building one-fifth; in the Fine Arts seven-twelfths. In the Forestry and Fisheries alone is New York's proportion small, but in each case all the space asked for was granted. This table should forever kill the two hydra-headed rumors so often clubbed into silence by this board: one that New York took no interest in the fair, the other that New York was discriminated against by the fair authorities.

### THE SECOND APPROPRIATION.

It became evident in the latter part of 1892 that the State could not make a display commensurate with its first rank as a Common wealth without an additional appropriation. The rivalry had become so intense between the different States that the prestige of New York was seriously threatened, while the work of preparation was seen to be far greater and more complicated than presented itself the year before. To keep the same proportion between its exhibits and those of other States, as actually exists in the commercial world, required the development of comprehensive plans for which both time and money were necessary factors. As the former element was limited the emergency could only be met by a greater use of the latter. Many absolutely necessary features could have been prepared at half the cost had six months or a year's more time been at the command of the commission. Furthermore, in seven of the thirteen departments of the exposition the Board of General Managers were compelled to assume the preparation of a collective exhibit, as in no one of them was there a commercial return large enough to warrant intrusting the display to private enterprise. A statement of the case was made to the public through the press and a bill introduced in the Legislature when it met in January, 1893, asking for $300,000 more to complete the work. The almost unanimous opinion was that it should be granted immediately and no effort be spared to insure New York's supremacy at the fair. It was conceded by all that the total amount was not large in consideration of the fact that New York could not afford to make an inadequate display of her varied resources at a fair subjected to the

scrutiny of the civilized world. The bill took the regular course through the Legislature, passing the Senate on February twenty-eighth, and was only delayed for about three weeks while the State Comptroller was preparing an itemized account of the expenditures of the Board of General Managers pursuant to a resolution adopted by the Assembly. The result of the inquiry was creditable in the highest degree to the prudence and ability of the board, and the bill unanimously passed the Assembly on March 22, 1893. Contracts which had been awaiting the decision of the Legislature were signed and work in each department pushed ahead on the broad lines already planned but temporarily suspended.

By the action of the board at its December meeting Mr. Louis Meredith Howland, a member of the commission, was appointed a committee of one in charge of the New York State Building to supervise its construction and furnishing. It was deemed extremely desirable to have it in readiness for the presidential visit on opening day, even if not complete in its minor details.

On the twenty-third of March the Judicial District Commissions were abolished by the following resolution passed at the monthly meeting of the board:

WHEREAS, the bureaus established in the several judicial districts have accomplished and completed the purposes and labors for which they were organized; and,

WHEREAS, the constant demands for aid from the State, in collecting and making exhibits require the husbanding of the moneys appropriated by the Legislature, therefore, be it

*Resolved*, that the chief executive officer be and he is hereby directed to notify the said judicial district boards to close their respective bureaus, dispense with the services of clerks, salaried officers, etc., and cease on or before April 1, 1893, all expenses which otherwise would be a charge upon the funds and resources of the Board of General Managers.

The work of the District Commissions was in a sense supplementary to that of the Board of General Managers, inasmuch as the chief efforts of the latter were directed towards making the collective exhibits in the seven departments already referred to, while the efforts of the former were mainly to procure individual exhibits in the other six departments which were more mercantile. Many of the commissions performed their duties with ability and were of great service to the

State in arousing public pride and enterprise. Upon the final assignment of space, however, by the Chicago authorities their days of helpfulness were necessarily ended and the Board of General Managers were constrained to cut off expenditures in this direction and apply the money where it would be of greater benefit to the State.

## THE NAVAL REVIEW.

In the same act that created the World's Columbian Exposition, Congress also provided for a naval review to be held in New York harbor April 27, 1893. All the maritime nations of the world were invited to participate. The fleets were to rendezvous at Hampton Roads and then proceed under command of Rear Admiral Gherardi to New York where they were to be reviewed by the President and other National and State officials. Nine foreign nations responded to the invitation: England, France, Germany, Russia, Italy, Spain, Holland, Brazil and Argentine Republic. Naval architecture had changed so radically since the war of the Rebellion, the last actual test of battleships, where the sturdy little "Monitor" closed the epoch of "wooden walls," that the review assumed more than a festal significance. Critical eyes from every nation noted the construction, maneuvering and new ideas as expressed in the thirty-five battleships ranged side by side. Nor were emotional features lacking in the situation. The spectacle of the ten most powerful navies sailing under one command and peacefully engaging in a common celebration has never before been seen and may never be again.

All of the expected vessels put into Hampton Roads during April, 1893, except two of Russia's squadron which were delayed by ice in the Neva. After a week of festivities at Fortress Monroe the fleet weighed anchor on April twenty-fourth and sailed for New York, anchoring in the lower bay. On the twenty-sixth they proceeded slowly up the river to their assigned positions off the upper part of the city, preparatory for the review. As they passed the Battery the statue of John Ericsson, the designer of the "Monitor," was unveiled, and was saluted by the heavy guns of the "Philadelphia," the flagship of the squadron.

The morning of the twenty-seventh was rainy and cheerless, in extreme contrast to the favorable weather which greeted the October review, but after a short postponement, the reviewing vessel steamed out into the river and passed up between the warships anchored in the following order:

EIGHTH JUDICIAL DISTRICT COMMISSION

| LEFT COLUMN. | RIGHT COLUMN. |
|---|---|
| Philadelphia (U. S.), flagship | Blake (England) |
| Newark (U. S.) | Australia (England) |
| Atlanta (U. S.) | Magicienne (England) |
| San Francisco (U. S.) | Tartar (England) |
| Bancroft (U. S.) | Dimitri Donskoi (Russia) |
| Bennington (U. S.) | General Admiral (Russia) |
| Baltimore (U. S.) | Rynda (Russia) |
| Chicago (U. S.) | Arethusé (France) |
| Yorktown (U. S.) | Hussard (France) |
| Charleston (U. S.) | Jean Bart (France) |
| Vesuvius (U. S.) | Etna (Italy) |
| Concord (U. S.) | Giovani Bausan (Italy) |
| Nueve de Julio (Argentine Republic) | Infanta Isabel (Spain) |
| Van Speyk (Holland) | Reina Regente (Spain) |
| Kaiserin Augusta (Germany) | Neuva Espana (Spain) |
| Seeadler (Germany) | Aquidaban (Brazil) |
| Miantonomoh (U. S.) | Tiradentes (Brazil) |
| | Republica (Brazil) |

The "Dolphin," of the United States navy, was the reviewing vessel of President Cleveland, while the "Cushing" and "Stiletto" were used as dispatch boats. The coast steamer "Monmouth" was reserved for Senators, Representatives and their guests, and the patrol steamer "Blake" for the Diplomatic Corps. The New York State officials, World's Fair Commissioners and Legislature were carried by the steamer "Gen. Slocum," and were given a prominent position at the head of the line. Neither threatening skies nor pouring rain could keep at home the immense crowd which gathered at every vantage point along the whole shore line of ten miles. The sight was one in a lifetime. The "Dolphin" passed the splendid battleships, full rigged and manned, while under their protecting guns lay the tiny caravels, "Nina," "Pinta" and "Santa Maria." These frail-looking vessels, flying the ancient banner of red and white which once symbolized the might of Castile and Aragon, formed a striking contrast to the modern ships which represented every phase of naval engineering, from the powerful armored battleships, "Jean Bart" and "Blake," to the swift torpedo boat "Cushing." One of the features of the review was the marvelous rapidity and precision with which the firing of salutes was conducted. During the evening interesting exhibitions of search light drilling and

night signaling were given. The Very and the Ardois systems were exemplified in the latter. On shore the anniversary banquet of General Grant's birthday was being celebrated, followed by the famous naval ball at the Madison Square Garden at which all the notables of the country were present with the Diplomatic Corps and foreign officers.

On Friday, April twenty-eighth, the shore parade of sailors and marines from all the men of war in the harbor took place. The hardy tars were escorted by the naval reserves of New York and Massachusetts and the National Guard of New York; the parade, though small in comparison with the monster one of the previous October, was most successful and attractive by its novelty. At its close President Cleveland, the Duke of Veragua and party, the World's Fair Commissioners and others took the train for Chicago to be in time for the opening exercises, May first. The celebration was ended in New York by a banquet in the evening given at the Waldorf by the Chamber of Commerce in honor of the commanding officers of the fleet. The whole celebration passed off as smoothly and successfully as in October, and was of the highest credit to New York as well as to the nation.

### OPENING EXERCISES AT CHICAGO, MAY 1, 1893.

Inasmuch as the buildings and grounds had been dedicated with elaborate pomp and ceremony the preceding October, the formal opening was reduced to a few simple exercises, the more impressive as the vastness of the undertaking lay at length revealed. A short introductory statement by Director-General Davis, a brief speech by the President, Grover Cleveland, and at noon the electric signal was given by the President which set the ponderous machinery in motion and announced from guns, bells and whistles, that the great exposition was in progress.

Barely twelve and one-half months had elapsed since the Board of General Managers had been appointed, but in that time New York's interests had been well looked after in each department. Not all of New York's exhibits were in a completed state by May first, but this condition was common to all, and New York was fully abreast of her competitors in this respect. In point of fact the month of May was nothing but a dress rehearsal for the main exhibition period. The music of the hammer and saw took precedence over everything else, and it was not until June first that the fair could be said to be in a finished condition for visitors.

## NEW YORK'S PART IN THE FAIR.

What was done by the board directly for the State in the various departments of the exposition is fully set forth in the detailed reports furnished by those who had immediate charge of the exhibits, and incorporated in the latter part of this volume. But the following general statement of their location and character may serve as a summary of the work which has been done in this direction, and may also be supplemented by a description of noteworthy exhibits in buildings and departments not specially cared for by the Board of General Managers.

### AGRICULTURAL BUILDING.

*Agricultural Exhibit.* This was in section 6, on the south side of the main aisle, near the eastern entrance, and occupied 4,000 square feet. James Wood, of Mt. Kisco, was director-in-chief, and Hezekiah Bowen, of Medina, assistant. The exhibit was planned scientifically, and was designed to show the great variety and climate which distinguished the State, and the endless diversity of agricultural products which are thus rendered possible. While New York has always occupied a prominent place in the agricultural States, and led in many staple productions, the fact is not generally recognized that the agricultural products of this State are greater in quantity, more varied in kind, and of equal if not better quality than those of any other State. The great variety of soils renders it possible to adapt the crops to the locality, and cultivate them under the most advantageous circumstances. The exhibit brought out these facts in a striking manner. One of the most noteworthy features was a series of bromide enlargements, from photographs taken in the hop region of New York during the harvest season. In consideration of the fact that in 1890 New York had 36,670 acres under cultivation for hops, and raised 20,063,029 pounds, which is fifty-one per cent of the entire yield of the United States, the pictures assume a wider significance than at first appears. Many other special industries which are not correctly appreciated, even by our own citizens, were similarly brought out. In the autumn 250 varieties of potatoes raised in the State were on exhibition, and over 100 varieties of grasses, native or domesticated in our soil. In all the groups of this department New York firms were prominent, and some adequate idea of the extent and excellence of New York's complete exhibit may be gained from the findings of the

Bureau of Awards, which granted New York State 585 awards in the agricultural department.

*Apiarian Exhibit.* In the eastern gallery, group 23, almost directly over the agricultural exhibit, and occupying 1,500 square feet. was an exhibit of comb and extracted honey, with all the modern appliances of the apiary art. In addition to this six colonies of bees were transported to Chicago and gave a live exhibit of the making of honey under the best improved conditions. New York was the only State to present this feature. The exhibit was in charge of Orel L. Hershiser, of Buffalo.

*Wool Exhibit.* This exhibit embraced all the varieties of wool produced in the State, and was situated in the western section of the north gallery. It was separated from the main agricultural exhibit under the ruling of the exposition regarding collective exhibits, and was nearest the dome in the line of wool exhibits of the various States.

*Dairy Exhibit.* Although a subdivision of the agricultural department, the dairy exhibits, for obvious reasons, required a separate building. This was situated to the southeast of Agricultural Hall near the shores of South Pond. New York occupied 470 feet of space in the northwestern part of the Dairy Building, and fully exemplified the methods of making butter and cheese which has rendered the State foremost in those industries. The dairy test, in which many celebrated cows of different breeds from New York were entered, was conducted in a building near here. The work of collecting, transporting, installing and caring for the dairy exhibits was done by the aid of a committee appointed by the New York State Dairymen's Association from funds supplied by the State Board of Managers. Josiah Shull, of Ilion, superintended the collection of exhibits. Arrangements were made for the reception of butter and cheese exhibits at central points for the various districts of the State, in the months of June, July, September and October, for their conveyance in refrigerator cars, and their preservation in refrigerated cases at the exposition. The plan worked perfectly and the State had constantly on exhibition the finest products of its farms and factories. Two hundred and ninety-seven awards were taken in this exhibit — 136 for butter, 156 for cheese and five for miscellaneous exhibits.

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## HORTICULTURAL BUILDING.

New York occupied 20,000 square feet of space in this building. In addition 50,000 feet were taken up by New York greenhouses and 92,000 feet by lawns and gardens. The exhibits were divided into three parts — floriculture, pomology and viticulture.

*Floral Exhibit.* Fifteen thousand feet, or nearly one-half of the space under the great dome, was occupied by an artistic exhibit in the form of a mound of ferns, shrubs and plants. In the rotunda opposite the mound there was in season an exhibit of gladioli and cut flowers, and overhead in the gallery an exhibit of floral designs. Just northwest of the western main entrance, and occupying a lawn space of 50,500 square feet, were nine greenhouses, including an orchid house, a Victoria Regia house, a commercial rose house and one filled with foliage plants. A little further to the northwest, in the direction of the Midway Plaisance, was a model of an old-fashioned flower garden, occupying 2,500 square feet. Between Horticultural Hall and the Lagoon, New York occupied three-fourths of the lawn space, besides furnishing the beautiful display of aquatic plants in the fountain east of the main entrance. On the Wooded Island 30,000 square feet were planted with ornamental trees, shrubs and rose gardens. New York easily led all competitors by this magnificent exhibit, and great praise is due the superintendent, James Dean, of Bay Ridge, and James Donlon, his assistant, for their energetic and scientific work. Forty awards were taken in this group.

*Pomological Exhibit.* In the south curtain of the Horticultural Hall, occupying 2,973 square feet, officially designated as department B, group 21, was the pomological exhibit containing all the fruits of the State. As an exhibit of perishable products requires constant renewal, the display required the utmost care and good arrangement on the part of its chiefs. The unquestionable success of the exhibit is a sufficient commentary on this point, and the truth was demonstrated, that with the exception of citrus fruits, New York produced more fruit than all the other States together. George T. Powell, of Ghent, was superintendent of the exhibit, and E. G. Fowler, of Port Jervis, assistant. Thirty awards were granted New York in this group.

*Viticulture.* In the southern gallery at the head of the west staircase was an exhibit of sparkling and still wines, and on the first floor

an exhibit of brandies, cordials, etc. The grapes were shown with the pomological exhibit. The display of grapes and wines from New York was a revelation to thousands of visitors who had little idea of the extent and excellence of grape cultivation in the Chautauqua and Keuka districts, and that the money value of the grape crop of New York is greater than that of the grape crop of California. Near the eastern entrance of the Midway Plaisance was an exhibit showing the best methods of vine section and trimming. The viticulture exhibit received twenty-two awards, and was in charge of George C. Snow, of Penn Yan.

In the dome gallery of the Horticultural Building was an exhibit, occupying 240 feet, of the edible fungi of the State, arranged by Charles H. Peck, State botanist, and in the gallery of the north annex were shown two large cases of canned fruit.

### LIVE STOCK EXHIBIT.

This exhibit was located in the southern part of the grounds, and varied according to the schedule prepared by the exposition authorities, different periods being set aside for the exhibition of different animals. It comprised successive shows of horses, cattle, sheep, swine, poultry and pigeons. New York took fifteen medals, four diplomas, fifty-seven first premiums, forty-three second premiums, forty-five third premiums and thirty-seven fourth premiums. The total amount of prize money received by New York exhibitors was $5,620, a sum greater than the cost of the exhibit.

The exhibit of live stock in the ratio of the aggregate of prizes awarded to total expenditure was successful beyond precedent. For this result the commissioners acknowledge their obligation to the Hon. James Wood, superintendent. The wisdom of his course of thorough preliminary inspection and selection by which only the best live stock offered was forwarded from New York to Chicago, enabled him to complete the work at a total cost of but one-fifth the sum originally apportioned for this department.

### MINES AND MINING BUILDING.

It is a fact worthy of mention that at no exhibition, national or international, has there ever been a complete exhibit of the geological formation and mineral resources of this State. This is the more remarkable inasmuch as below the coal measure the rock formation of New York affords a key to the geology of the whole country.

The exhibit in this department was instructive, impressive and comprehensive, and was supervised by Prof. F. J. H. Merrill, of Albany. The space was marked by a magnificent obelisk, which stood in front of the pavilion, illustrating by its polished specimens the rock formation of the State from the older Laurentian system to the base of the coal measure. Within the pavilion, which occupied a space of 1,891 feet, were the specimens of all the rocks, minerals and soils of the State, supplemented by the commercial products derived from them. Near the center of the west gallery was the mineralogical collection of the New York State museum, the product of years of patient collection and research.

In the northeast gallery was the relief map of the State of New York. This map, probably the largest of its kind ever constructed in the United States, was made for the Board of General Managers by Ward's Natural Science Establishment of Rochester, N. Y., under the direction of Henry L. Ward.

There being no complete survey of the State it was necessary to make numerous corrections to existing maps in regard to the location of towns, etc., and to compile from multitudinous sources a table of altitudes. Published lists, engineer's copies of existing or proposed railroad and canal profiles, data collected by various cities and engineers and surveyors all over the State were brought together, reduced to mean tide level and became the basis from which the map was built. All the maps and data bearing on the subject published by the United States and State surveys and departments were utilized, and hundreds of communications passed between the maker and surveyors and engineers all over the State, in order to incorporate all the reliable data possible. A vast amount of labor was expended in this part of the work, but the result was highly satisfactory, as much more data was obtained than was supposed to exist. The construction of the map was begun July 15, 1892, and with the combined work of twenty-two persons finished April 20, 1893. The extreme measurements of the map are, from north to south, twenty-six feet two and three-fourths inches, from east to west, thirty-five feet two and three-fourths inches. The greatest relief, Mount Marcy, is about ten and one-half inches.

The amount of variation in the surface of the State displayed by the map was a revelation to many persons. One may have crossed the State in various directions and yet have a very poor idea of its topography, because the ordinary routes of travel run, as a rule, through

wide valleys that give little indication of the heights of the hills not far removed. Looking down upon the map the mountains of the Catskills and Adirondacks with the ridge connecting them are seen tc form a barrier between Lake Ontario and the sea, which is pierced at Little Falls by the steep and narrow pass of the Mohawk, the existence of which made the building of the Erie canal a possibility. Alongside of the high peaks of the Adirondacks are deep precipitous valleys, often partially filled with water, forming the wonderful series of lakes here represented. One of these valleys, larger and deeper than the rest, holds Lake Champlain, the bottom of which is over 100 feet below sea level. Near the southern border of the State can be traced the great watershed between the Gulf of Mexico and the Atlantic. In one place this approaches within about five miles of Lake Erie. That is to say, at this point rises a stream that eventually finds its way through the Ohio and Mississippi rivers into the Gulf of Mexico.

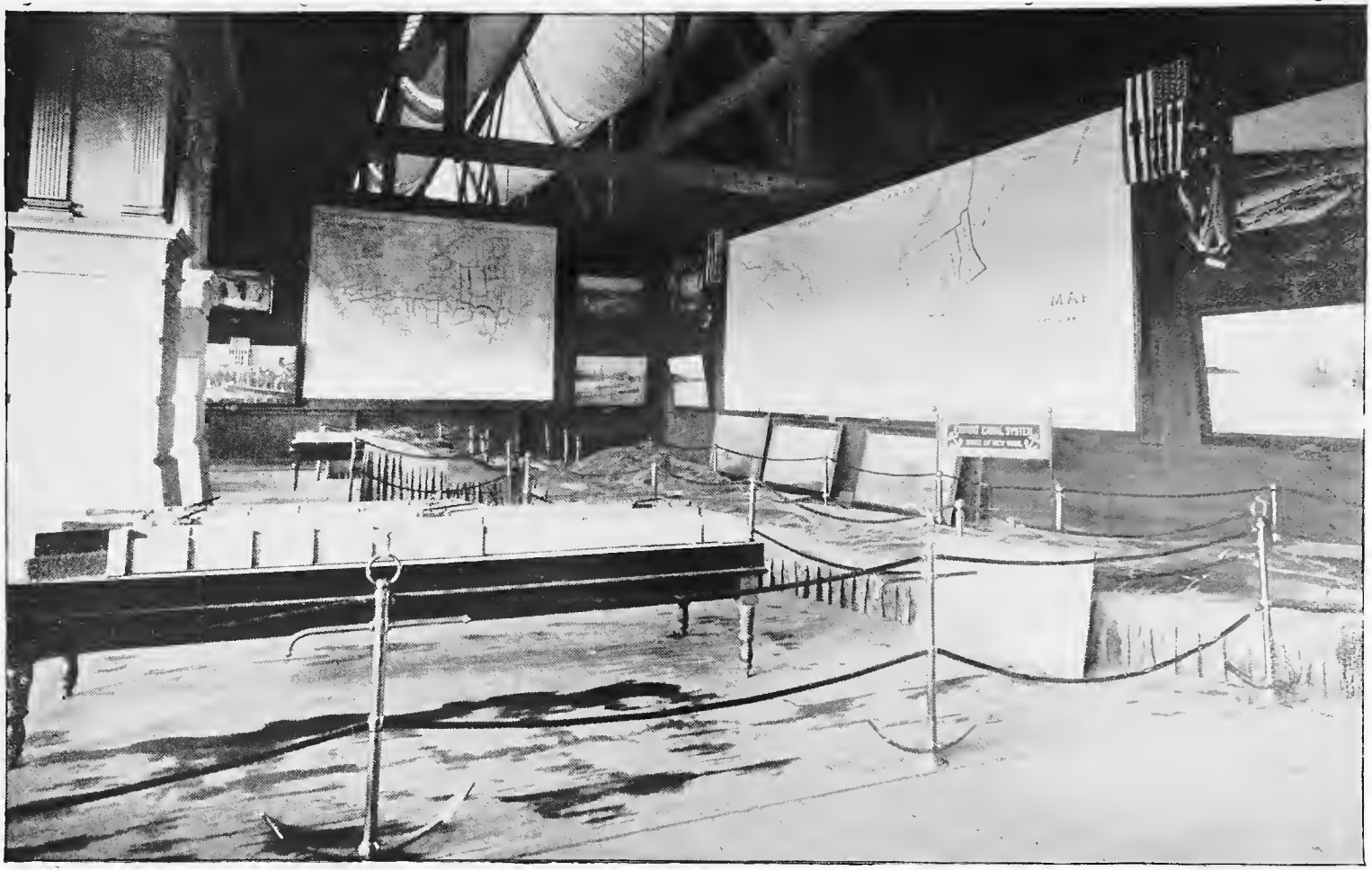
The frame of the map and all extra-limital parts of the cast are brought down to sea level, thus affording an easy mode of comparing the heights near the border. The principal altitudes are marked in plain figures representing feet. The canals are all made one-fourth of an inch wide so as to be easily seen. Their locks are represented by changes in altitude corresponding to the lift or drop of the lock depicted. While it is not claimed that the map is founded on perfect data, as such are not obtainable until the topographical survey of the State is completed, yet every precaution was taken to exclude errors.

The mines and mining exhibit received ninety awards.

### TRANSPORTATION BUILDING.

Two thousand four hundred and fifty square feet of space was occupied by New York for a collective exhibit in this building. From the nature of the display the bulk of the exhibits was necessarily shown by firms and corporations in the carrying trade, but many important features from a comparative and historical point of view could only be supplied by the State commission.

The organization and improvement of the highways of commerce throughout the State, and their recognized agency in contributing to the development of the West, further justified a special exhibit in the department of transportation. The first successful application of steam to the propulsion of vessels, made in New York waters in 1807, the construction of the Erie canal, 1817 to 1825, and the first regular



TRANSPORTATION EXHIBIT

passenger railway train over the Albany and Mohawk railroad in 1831, were events which made the history of New York illustrious in the early struggle for commercial supremacy. The distinguished inventors who have kept the State at the front, of whom the list of awards is a partial recognition, were well represented in the individual exhibits.

The exhibit by the State comprised a relief map, fifty by fifteen feet, scale two inches to the mile, of the section intersected by the Erie canal. This map, made under the supervision of the State Engineer, showed at a glance the system of water supply, and justified engineering science in the location and construction of that great public work. To contribute historical as well as present interest, a model was shown of an original wooden lock, made at Little Falls in 1795, with an elaborate model (scale one-thirtieth) of the latest standard enlarged lock of the Erie canal. Photographs were collected illustrating early modes of travel, by reproductions from sketches, and showing the present method of delivering the immense freights floated eastward by canal; one picture represented a typical tow on the Hudson, November 26, 1892, of sixty-four boats aggregating 12,630 tons. The aqueducts over the Genesee at Rochester and over the Mohawk at Crescent and Rexford Flats were shown by photographs. To the water system exhibit was added a large map, specially prepared, of the extensive railway system of the State, showing eighty-two railways, with a total mileage of 8,724.88 miles. This exhibit, donated to the State museum, is the nucleus of what it is to be hoped will become a complete collection which shall illustrate every stage of progress in the methods and appliances of passenger and freight transportation. The resources of the offices of the Superintendent of Public Works and the State Engineer and Surveyor were freely placed at the disposition of the board of managers and much valuable material obtained from them.

The collective exhibit at the exposition was supplemented by individual and commercial exhibits of great value. That of the New York Central and Hudson River Railroad Company is worthy of special mention. It combined the reproduction of the historic locomotive "De Witt Clinton" and the coaches of 1831 with a fully equipped modern passenger train of express, drawing-room and sleeping cars, attached to locomotive No. 999, with a record of 112 miles an hour.

The whole number of awards granted New York in this department was seventy-three.

## PALACE OF FINE ARTS.

The place assumed by New York in the American section of the fine arts exhibit was extremely gratifying to New York pride, and emphasized particularly the fact that New York city is the acknowledged art center of the New World. Out of the 36,000 feet of space reserved for American exhibits, New York occupied 21,000 feet.

The art bureau of the State of New York was composed of the New York members of the Federal advisory committee for fine arts. Mr. J. Q. A. Ward was chief and Wm. B. Tuthill, secretary. By their energetic management 2,137 works of art were submitted to the bureau for their judgment, of which number 1,349 were selected and forwarded to Chicago for exhibition. In addition 306 works of art were placed at the disposal of the bureau for the loan exhibition.

The high grade of excellence displayed in the works and the wise selection of the bureau were fully attested by the juries of award, which granted eighty-six New York artists medals and diplomas, covering 540 pieces, or nearly one-half the number placed on exhibition

## MANUFACTURES BUILDING.

*Liberal Arts Department, Educational Exhibit.* In the center of the south gallery, on the bridge leading out from the department offices, was the exhibit of the schools and colleges of the State. This was by far the largest exhibit gathered under the auspices of the State board and one of the most satisfactory. It occupied 13,764 feet, or one-seventh of all the space devoted to education, and embraced a complete exhibit of the educational work of the State from kindergarten to university. The director of the exhibit was Secretary Melvil Dewey of the University of the State of New York, with Howard J. Rogers, of Albany, assistant.

The installation of the exhibit was particularly effective, the broad aisles and roomy alcoves, richly furnished and artistically arranged, giving it an attractive appearance beyond anything attained elsewhere in the department. The exhibit became the headquarters for New Yorkers at the south end of the grounds. The educational department was created by the Board of General Managers the latest of all the sub-departments, but by the energy of its director, Secretary Melvil Dewey, who had at his command all the machinery of the State University, and his executive staff an exhibit far exceeding any other

State's was gathered in an incredibly short time. Eighteen cities and towns made collective exhibits in addition to which 142 individual schools, five manual training schools, 373 academies and union schools and twenty-eight colleges contributed to the success of the display. Some idea of the size of the exhibit may be obtained when it is stated that it weighed 115,900 pounds and required nine cars to transfer it from Chicago to Albany. The figures here given do not include the exhibit of New York schools for deaf, blind and feeble minded, art schools and business colleges, all of which, under individual auspices, made exhibits situated in the west gallery; nor does it include the parochial schools of New York, which formed so large a percentage of the Catholic exhibit in the east gallery. New York had all the usual material pertaining to educational exhibits, but was rich in special features never before brought out. For a complete description of these reference must be made to the detailed report from that department in the latter part of this volume.

New York took 401 awards in the liberal arts department, 174 of which were in the educational division. Other exhibits made in this building, under the auspices of the board, were the relief map of Lake George and vicinity, famous in the early history of our country, and a large photographic exhibit of public monuments in the State erected in memory of soldiers, sailors and distinguished men. These were situated in the northeast gallery.

*Workingman's Model Home.* Allied to this department, though of necessity not in the building, was the workingman's model home located in the southern part of the grounds, and in charge of Miss Katherine B. Davis. From an economic standpoint this was one of the most valuable exhibits on the grounds, as it demonstrated the ability of a workingman to support a family of five (wife and four children) on a wage earning of $500 a year. This was not a theoretical tabulation of figures and conditions, but a practical example. A family of six was supported throughout the exposition months at pro rata cost in a most successful manner. The bills of fare price of food, clothing, etc., were tabulated and kept for reference and a model home run on strictly business principles. The house was a two-story frame building, representing one that could be built and rented by a capitalist at a rate not exceeding ten dollars a month; or it could be built by the workman himself in New York State, outside

of New York city, for $1,000. The exhibit was the idea of Hon. John Boyd Thacher, a member of this board, and was developed on the lines devised by him.

*Cooking School Exhibit.* At the south end of the Anthropological Building was the New York State exhibit in sanitary and hygienic cookery, prepared under the auspices of the women's board. Practical illustrations were given daily in matters belonging to housekeeping, special attention being given to the preparation of foods for invalids and children. There was also an exhibit of household articles invented by women. The exhibit was in charge of Miss Juliet Corson, of New York city.

ANTHROPOLOGICAL BUILDING.

*Exhibits of Charitable, Correctional and Penal Institutions.* These exhibits were distributed over a large section of the southern portion of the building, and comprehended the entire scope and character of the methods of dealing with the defective, delinquent and dependent classes of the State. The exhibits included pictures, photographs and charts of the Buffalo State Hospital for the Insane, a model of the Utica Asylum, an exhibit of the Willard Asylum, and of the Binghamton State Hospital for the Insane. There was a complete exhibit of the work done at the State Industrial School at Rochester, and a large model of the Elmira Reformatory.

There was also an exhibit from the New York House of Refuge, from the Hebrew Orphan Benevolent Association, the Hebrew Technical Institute, the St. John's Guild Floating Hospital of New York, a model of the Letchworth plan for an almshouse, the Fitch Crêche of Buffalo, and the Soldiers' and Sailors' Home of Bath.

*Natural History Exhibit.* In the gallery there was a large exhibit of mammals, shells, etc., from the State museum, and the skeleton of the celebrated Cohoes mastodon.

*Health, Water and Quarantine Exhibits.* On the first floor of this building, in the department of hygiene, were exhibited the quarantine system of New York State, and the city water supply from the Croton aqueducts. The exhibit consisted of charts, maps, photographs, model of crematory, etc. The exhibits of the State board of health, and of the board of health of New York city, were also to be found here.

GRAND CANAL, LOOKING NORTH FROM COURT OF LIONS

*Indian Exhibit.* Between the Leather Building and the South Pond, near the old whaling ship, was an exhibit of the Iroquois confederacy, with representatives from each of the Six Nations. The small village erected occupied 8,250 square feet. Twelve of the lineal descendants of the founders of the famous confederacy whose supremacy was felt from the Atlantic to the Mississippi, and whose alliance with the English rendered easy the rapid development of central New York, were present throughout the fair. Their exhibit comprised wigwams built in ancient style, canoes, fancy wood and bead work and a *fac simile* of the historic long house or *ho-da-no-sau-nee* in which their councils were held. Side by side with these reminders of the historic past were the products of the peaceful pursuits of the present day and statistical information on the growth in wealth and industries of the various tribes. Illustrations were given of the customs, life and folk lore of the Iroquois at various times during the exposition. The exhibit was in charge of Rev. John W. Sanborn, of Naples.

## FORESTRY BUILDING.

This exhibit of woods from trees native to the State was in the southern portion of the Forestry Building on the lake front and occupied 1,566 square feet. It was by far the most scientific of any of the forest displays. It not only gave log sections cut so as to show bark and grain, but sections of the wood showing transverse, radial and tangential views of the grain, so thin as to be translucent and hence revealing the characteristic structure. The exhibit was admirably arranged to bring out all these special features and attracted wide attention for its compactness, thoroughness and scientific value. It was prepared and supervised by Romeyn B. Hough, of Lowville.

## GOVERNMENT BUILDING.

In the rotunda of the Government Building were thirteen large panels which were at the disposal of the thirteen original States for a display of colonial and historical relics and curios. New York's was specially attractive in interesting relics owing to the broad and rich domain of early New York history and to the exertions and influence of Mrs. Jones, of the Board of Women Managers, and Mr. Thacher, of the Board of General Managers, in securing the loan of articles for the exhibition, and in bringing many famous mementoes from their hiding places.

Prominent among the articles exhibited were the Washington relics from the State library, autographs of the Presidents and the signers of the Declaration of Independence, original model of Fulton's "Clermont," and the wampum belt commemorative of the first treaty and alliance of the Six Nations of New York, and now in the possession of Hon. John Boyd Thacher, of Albany.

### WOMAN'S BUILDING.

Nearly every department in this building contained exhibits gathered by the State Board of Women Managers, but New York's special feature was the library room which was furnished magnificently by the New York board. Five thousand dollars was granted by the Board of General Managers for this purpose. The ceiling, designed and executed by Dora Wheeler Keith, and the collection of books written by women native to or resident in New York were the chief features.

### EXHIBITS OF SPECIAL PROMINENCE.

Although the foregoing exhibits were all, strictly speaking, that were prepared under the supervision of the Board of General Managers, there were several exhibits from New York, so specially noteworthy from their size, beauty, and the credit they reflected on the State as to demand more than a passing mention. In four departments, viz., machinery, manufactures, electricity and fisheries, the Board of General Managers depended entirely upon private individuals to fully represent the State, and in no wise aided them financially. The transportation exhibit also was chiefly the work of individual companies. The confidence of the board in the enterprise of New Yorkers was not misplaced, and in every one of the five departments the exhibits from this State were on a par with other States and countries, and in some far surpassed them. While the general average was so completely satisfactory to New York pride the incomparable excellence of a few exhibits was a source of special gratification. Such were the exhibits of Tiffany & Co., Tiffany Glass and Decorating Company, the Gorham Manufacturing Company, and Gunther's fur exhibit in the Manufactures Building; Ward's natural science exhibit in the Anthropological and Mines and Mining buildings; the General Electric Company in the Electricity Building; the Westinghouse, Church, Kerr & Co. engine exhibit, the Henry R. Worthington pumping machinery exhibit in the Machinery Building; and the New York Central exhibit in the Transportation Building.

The entrance to the American section in the center of the Manufactures Building was a tribute to the public spirit and enterprise of three New York firms, Tiffany & Co., Gorham Manufacturing Company and the Tiffany Glass and Decorating Company. They assumed the responsibility of erecting a pavilion which would worthily represent the United States when contrasted with those of England, Germany and France, on the other three sections formed by the central aisles; an undertaking which the United States government would not perform, and which the Chicago management through lack of funds could not do. The pavilion suggested the colonial style of architecture, and was surmounted by a Corinthian column supporting a globe upon which rested the national eagle. It was designed by Architect John Du Fais, of New York; the structure was by far the most extensive in the United States section.

The exhibit made by Messrs. Tiffany & Co., gold and silversmiths of New York city, although a corporation of this State, was essentially a national exhibit, as it was the skill of their artists and artisans that brought to this country, for successive periods, the highest awards for art metal work from the art center of the world, the Grand Prix having been awarded to their products at the Paris expositions of 1878 and 1889.

At the World's Columbian Exposition their display consisted of five distinct exhibits. The main one in the Tiffany pavilion, in the center of the Manufactures and Liberal Arts Building, represented an investment of about $1,000,000, and was one of the notable features of the fair. The famous central case of diamonds, with the $100,000 revolving Tiffany gem, the Canary diamond girdle, and hundreds of smaller pieces brilliant with gems, the silver magnolia vase with its marvelous enamelling, the several astronomical clocks, the display of gems in the rough, the fine stationery and illuminated work, the electro silver-plated ware, and the extraordinary display of sterling silver services and individual pieces, have all become fixtures associated with the World's Fair in the minds of its millions of visitors.

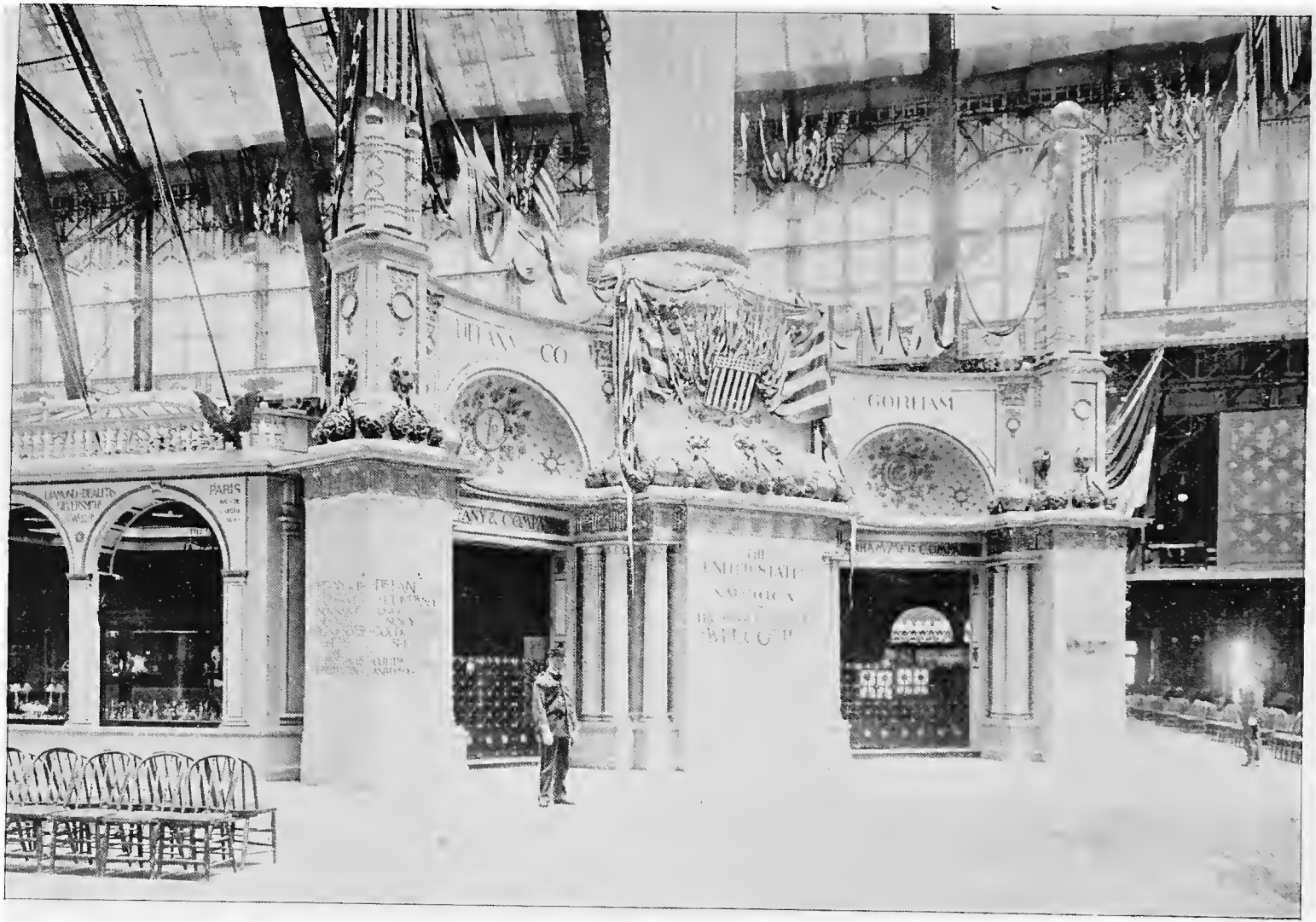
In the Mines and Mining Building the firm had a very costly and complete plant in connection with the De Beers diamond mining exhibit, showing the diamond-cutting arts, and illustrating every stage in the evolution of the diamond from the pebble as found in the rough to the polished gem in the showcase. This proved an extraordinary attraction. In the galleries of the Mines Building the house had two

other exhibits, one of cut and uncut precious stones and gems, and a metallurgical collection illustrating the alloys of gold, silver and other metals and by-products.

Another very interesting display made by the firm was in connection with the United States national museum exhibit in the Government Building; their exhibit here consisted of a collection of rare and unusual leathers and skins of birds, beasts, fish and fowl.

The exhibit of the Tiffany Glass and Decorating Company illustrated most forcibly two points of great importance: the marked advance the decorative arts have made in the United States since the Centennial Exposition at Philadelphia in 1876, and the increased number of appreciative spectators.

The exhibit was particularly strong in showing the value of glass as a decorative material, especially in ecclesiastical art; this was made evident through the medium of a completely equipped chapel, constructed on Romanesque or Northern Byzantine lines, from the design of Mr. Louis C. Tiffany. The altar, retables and reredos were largely composed of glass mosaic in a setting of marble, enriched by inlays of mother-of-pearl, semi-precious and precious stones. The body of the altar was made of 150,000 pieces of flat, cream white opalescent glass in quarter-inch squares; this field of mosaic was relieved and ornamented with emblems and symbolic devices in various rich substances; the risers of the retable were filled with gold glass mosaic of the same size as that in the body of the altar and carrying inscriptions in flat opalescent glass; the reredos was in strong contrast to the altar both in color and in handling of the mosaic, yet most pleasing and artistic; in a wide setting of black marble there was a symbolic picture composed of iridescent glass mosaic, which gave forth blue, green and golden scintillations of pearl-like light. The mosaic pieces in this picture, in place of being squares, were made to follow the design, were large in size, and resembled in construction that species of mosaic the ancient Romans termed Alexandrine. Attached to and overshadowing the reredos there was a semi-ciborium, constructed of a series of receding round arches, the soffit of each arch falling below the one immediately next to it, in that way exposing a number of faces and enhancing the perspective; the whole was overlaid with gold, enriched with ornaments in relief, set with jewels, made brilliant with inscriptions and inlays of colored and gold glass mosaic. These arches rested upon twelve columns whose metal caps were made precious with relief ornament upon a back-




FACADE TO AMERICAN SECTION MANUFACTURES BUILDING

ground of colored glass mosaic, and astragals of jewels set in gold; while the shafts, resting upon bases and plinths of black marble, were made of 200,000 quarter-inch squares of transparent glass mosaic of red, green and brownish tones, worked to six different patterns having the cross as the general motive. The risers of the marble steps leading to the pedella of the altar carried ornaments and inscriptions in glass mosaic.

Hanging from the roof of the chapel there were three globe like sanctuary lamps made of rich deep green glass, very thick and faceted at every point, resembling immense emeralds. The chapel was illuminated by a number of very beautiful colored glass windows, in which were to be seen not only various figures of holy personages, but the very latest improvements and discoveries in glass in leading and construction; moreover, they were all built upon the mosaic system, the effect of light and shade having been obtained by the inequality of the surface of the glass, and there was an entire absence of paint, stains and enamels except in the faces and hands of the figures.

All the glass work in this exhibit of whatever kind, mosaic, windows, lamps, etc., made plain to all the great improvement that has been made in America over all similar European work, the vast range of color and its artistic application to decorative purposes.

In addition there were many objects in this exhibit of great merit and originality of design in wood, metal, marble, upholsteries and embroideries. That the exhibit was appreciated was apparent to all, not only from the number of people that entered the chapel, a little over 1,400,000 by actual count, but also from the questions asked, the remarks made and the words of approval heard from every side. The leading American and foreign art critics pronounced it a success both from an artistic and educational point of view, while ecclesiastics and lovers of Christian art were unanimous in their praise.

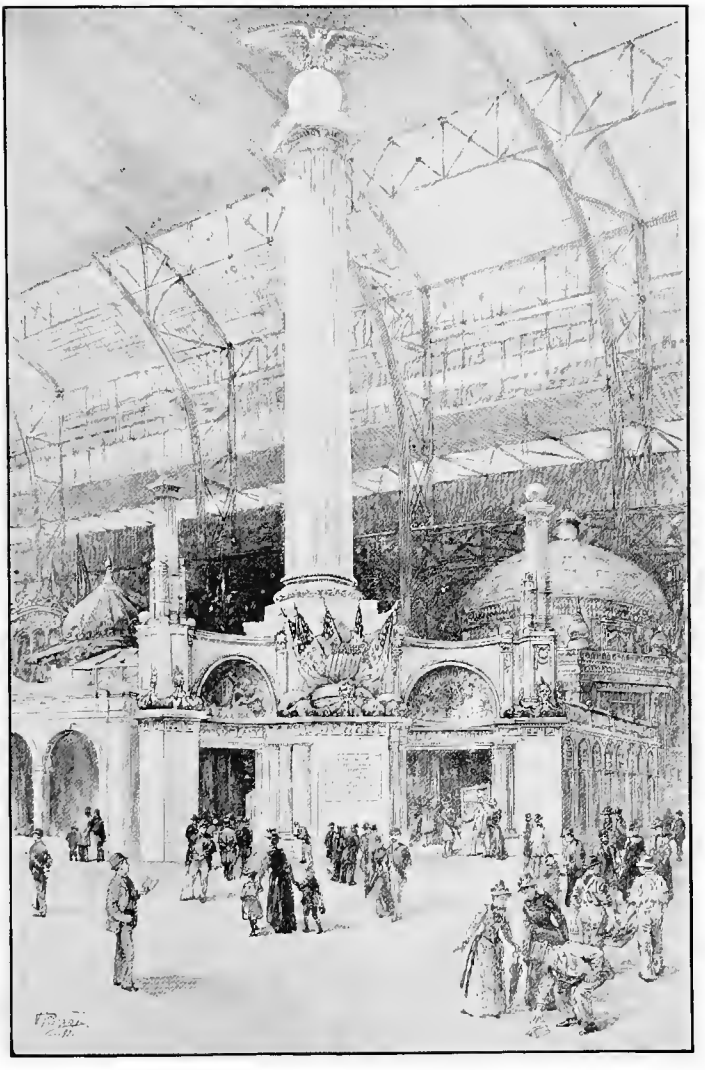
The exhibit of the Gorham Manufacturing Company occupied 3,700 square feet of surface, and within that space was displayed the examples of their productions in solid silver work and other metals, prepared especially for the Columbian Exposition. There was shown sterling silverware in all articles from the smallest piece weighing less than an ounce to the great statue of Columbus, which required in the casting 30,000 ounces of the precious metal; there were departments devoted to examples of their electroplated wares; cutlery, leather articles silver mounted, ecclesiastical wares in silver and various metals,

fine cut glass with silver mounts, enamels on silver and on bronze, bronzes, medals, decorated pottery with carved silver covering, chests and cases for silver of woods, leathers and fabrics. Forty-seven awards for superiority and excellence were granted to the Gorham Manufacturing Company for this exhibit, which was probably the most extensive and valuable of its class ever made by one exhibitor at any exposition, and represents the development of their business, which was started in Providence, R. I., in 1795.

C. G. Gunther's Sons' fur exhibit was striking and exceedingly artistic; remarkable as well for its unequalled appointments and general arrangement as for the imposing array of furs. One thousand six hundred square feet were occupied, mainly in the form of a raised platform approached at each of the four corners by handsome mahogany steps, guarded by superbly-mounted wolves and bears posing as attendants, with silver salvers containing the firm's cards, etc., extended toward the visitor. From the center of the platform and from the four corners rose tall, artistically-carved pillars nineteen feet in height, the center one being wound with bands of rich fur trimmings in the national colors and surmounted by a superior specimen of the black bear standing on a large terrestrial glass globe electrically illuminated, the animal holding an electric torch. The other four pillars supported a large collection of beautifully-mounted heads of deer, buffalo, moose and caribou, and were each crowned by a mounted American eagle.

The cases containing the manufactured furs were marvels in themselves. Two of these (horse shoe shaped) surrounded the central pillar, and around each side of the platform were arranged four other cases with handsome domes, the glass sashes of which were remarkable for their length of sixteen feet. All around were arranged superb specimens of mounted animals, and the exhibit was indescribably rich in sables, sea otters and other costly furs in creations of every description known to the trade, besides many unique and beautiful novelties. The firm received in all seventeen awards.

The exhibit made by the General Electric Company, whose immense factory at Schenectady is such a striking feature on the line of the New York Central railroad, was the largest and most comprehensive electrical exhibit at the exposition. It emphasized the pre-eminence of this great New York concern in the different electrical branches of railways, lighting, motors, mining, transmission of power over long distances, etc. In railways, it exhibited a complete and comprehensive line of



FACADE TO AMERICAN SECTION MANUFACTURES BUILDING, FULL HEIGHT

apparatus, from the smallest line insulator up to the largest electrical dynamo in the world. It installed, with apparatus solely of its own make, the famous intramural railway, which carried around the exposition as many as 150,000 people in one day. In the power house of this railway were gathered examples of its different types of railway dynamos, from the 200 kilowatt up to the large one above mentioned, four sisters of which are now operating the Brooklyn street railways.

In electric lighting, the exhibit proper comprised a complete history of the evolution of the Edison incandescent lamp, showing, by concrete examples, the thousands of experiments which its present perfection necessitated. The tower of light, situated in the center of the Electricity Building, and studded with thousands of lamps, which, lighted, formed an apotheosis of electrical incandescent lighting; an extensive exhibit of all the many different electric lighting devices, such as cut-outs, switches, regulators, etc.; and a complete exhibit of different forms of meters for measuring the amount of current consumed in every kind of work to which it has been applied, were notable. Prominent in the latter group was the Thomson recording watt meter, which was awarded the prize in France as better than any meter which the skilled electricians in Europe had been able to devise.

In Electricity Building also the General Electric Company exhibited a complete model arc lighting station, comprising many machines with all the accessory appliances, driven by a 250 horse power motor, the largest shown at the exposition. It also exhibited an immense arc lighting plant for service purposes in Machinery Hall, which was used to illuminate the grounds and the vast interior of the Manufactures and Liberal Arts Building by means of the five great coronas of light suspended in the arched roof. On the colonade, facing the Illinois State Building, was set the great search light, with a mirror five feet in diameter, reflecting a beam of light with an intensity of millions of candle power. In Electricity Building, and on the top of the Casino and Music Hall, were other search lights, fully equal in operation and workmanship to the productions of the best European workshops.

Its mining exhibit comprised electric locomotives for mine haulage, electric drills, both percussion and diamond, electric pumps, electric ventilators, electric coal cutters, and other devices. Here, also, was shown a complete power transmission plant, in which an electric pump fed water to a Pelton water wheel, which turned a three-phase dynamo. This in turn fed current to a bank of step-up transformers, which trans-

formed the current up to a very high pressure. It was then carried on bare conductors across the space to another bank of transformers, and, being there transformed down to a low pressure, was fed to a series of incandescent lamps, arc lamps and motors. This system is the only one in successful operation for power transmission purposes in the United States. The motor exhibit was scattered everywhere throughout the exposition, nearly every motor used being of this company's manufacture.

Other features of interest were the beautiful electric fountains, designed by Luther S. Stieringer, which formed such a conspicuous attraction in the Grand Court at night, the thirty-ton electric locomotive, the first ever on the steam railroads, and the small motors used to propel the electric launches on the canal and lagoons.

The New York Central and Hudson River railroad exhibit, already referred to under the transportation department, was replete with technical excellence and scientific devices and improvements. The famous engine, "No. 999," which had developed a hitherto unprecedented speed of 112 miles an hour while attached to the regular "Empire State express" train, was the chief feature. The description and weight of this engine is as follows: Weight of engine in working order, 124,000 pounds; weight on drivers, 84,000 pounds; weight on truck, 40,000 pounds; weight on tender, 80,000 pounds; cylinders, 19x24 inches; flues (2-inch), 268; heating surface, 1,697 square feet; diameter of driving wheels, 86 inches. The engine is equipped with air brakes, whistle signal and steam heat.

In addition there were also exhibited three standard passenger cars, consisting of a combination smoking and buffet car and two coaches, all similar to those running on the Empire State express train. These cars were built at the West Albany shops, having six-wheel trucks with steel-tired thirty-six-inch wheels. They were equipped with air brake, whistle signal, steam heat and Pintsch gas.

The tracks upon which the "exhibit cars" stood showed the New York Central standard double track roadbed, of eighty-pound steel rail on yellow pine cross ties, laid on broken stone ballast, with its standard thirty-six inch angle plate splice joint, secured by six steel bolts with cold rolled Harvey grip screws, and in connection with the same an exhibit was made of a sample of an improved "screw and clip" fastening, devised by its chief engineer, for securing the rails to cross ties to take the place of the ordinary common track spike. There was also displayed a single section of thirty feet in length of its standard

track and roadbed of 100-pound rails on steel cross ties, with broken stone ballast, a sample of section No. 1 extending from Grand Central yard to Mott Haven.

An interesting feature from a historical standpoint and forming a striking comparison with the methods of ordinary rail locomotion, was the working model of the first successful engine ever run in New York State, the "De Witt Clinton," together with the coaches.

Ward's Natural Science Establishment, of Rochester, N. Y., made one of the largest private exhibits at the exposition. Their exhibits of rocks and marbles occupied the north end of the west gallery of the Mining Building, and their exhibits of minerals and meteorites the south end of the east gallery of the same building. The entire south gallery of the Anthropology Building was filled by their collections of fossils, casts of celebrated fossils, shells and corals, mounted skins of mammals, birds, reptiles, batrachians and fishes, and mounted skeletons of the same classes. Below this, on the ground floor, was their exhibit of human anatomy, consisting of mounted and disarticulate skeletons and parts of skeletons and anatomical models.

Besides these exhibits there were numerous archæological and ethnological objects loaned by them to the chief of the anthropological department and exhibited under his auspices. The exhibits by this establishment were part of one great systematic collection of natural history that was thus divided into sections because sufficient room to exhibit it as a whole could not be obtained in any single building of the exposition. The main divisions of the collection were: Mineralogy, geology and petrology, palæontology, invertebrate zoology, vertebrate zoology, comparative anatomy and human anatomy. Each one of these divisions was a carefully planned unit by itself, covering the ground of each science as thoroughly and evenly as possible and still keeping the value ($100,000) within the purchasing means of some of the larger institutions of the country. Care was taken in each of these divisions to present in a thorough manner all aspects of the science, whether biological or geological sequence and relationships, geographical distribution and individual and geographical variations. The classifications used in the various branches were those of the recognized modern leaders in these divisions.

Typical and characteristic specimens were largely represented, interspersed here and there with rarities where necessary to present the different subjects in the most thorough manner possible. Much care

was exercised to exclude all poor and indifferent material. Numerous models, charts and pictures further served to elucidate the different subjects and facilitate their mastery by the student. The subject of mountings and labeling received careful attention; and while lack of space rendered impossible the use of many large explanatory labels, yet the principal points of scientific interest were clearly noted on each specimen. This was the largest single collection of natural history material ever brought together in this country at one time, and its acquisition by the Columbian Musuem of Chicago gives that institution a leading place among the natural history museums of America.

Besides this main collection were exhibited small collections of minerals, rocks, fossils, invertebrate animals and vertebrate animals designed for class room use in colleges, academies and union schools. Each of these was a unit in itself, presenting a complete outline of the branch it was designed to teach. In these low-priced collections great care was manifested in the careful selection of important type material, the even manner in which each subject was covered and the good quality, clear labeling and tasty mountings of the specimens. Thirteen awards were taken by this exhibit.

## THE NEW YORK STATE BUILDING.

The crowning feature of New York's display at the fair was the State Building. It occupied one of the most prominent and attractive sites in Jackson Park, and the Board of General Managers wish to place on record here, in behalf of the people of the State, their deep obligation to Director-General George R. Davis for reserving this space for New York. At the date of the organization of this board the time allowed for the filing of plans for State buildings had nearly expired, and it was only through the insistence of Director-General Davis, who publicly and privately proclaimed that New York would yet come grandly to the front, that the beautiful and commanding site opposite the Art Gallery was retained for New York's use. The building was planned with a view to its being a place of resort for citizens of New York visiting the exposition, and as a center for the dissemination of information regarding New York exhibits. It was primarily intended for the comfort, accommodation and convenience of the people; for meetings of State associations specially interested in any of the great departments of the exposition, and as a place where receptions could be given to New York societies and to the representatives of other States.

NEW YORK STATE BUILDING

Within its walls were gathered, in addition to works of art having a special appropriateness to its scheme of decoration, articles of interest, paintings, etc., illustrating the history and notable characteristics of the State. The magnificent proportions and the elaborate plan of external and internal decoration adopted for the structure were eminently appropriate to the representative character which it possessed at the World's Fair. Belonging to the period of the new birth of learning and of art, out of which grew the conditions that made the discovery by Columbus possible, it was a visible embodiment of the taste, the refinement and the wealth of the Florence of the Medici, and stood for some of the noblest ideals that have sprung from the union of a lucrative commerce with an enlightened civic pride. In the estimation of the most discriminating judges, no more fitting representation could have been made of the presence of the State of New York at the congress of nations. Obviously, therefore, one of the subjects which first demanded the attention of the board, after its organization, was the adoption of plans for the State building, inasmuch as the time had nearly expired within which, under the rules of the exposition, these should be filed, and as it was contemplated that all building operation, in Jackson Park should be completed in time for the dedicatory services in October, 1892. The space reserved was at once accepted, and, ten days after the first meeting of the board, plans for the State building were submitted by Messrs. McKim, Mead & White, architects of New York city. To invite and consider competitive plans in so short a time was out of the question, and the only course open to the board was to select architects of acknowledged eminence and to commit to them the work of designing such a building as would fitly represent the Empire State. The board was fortunate in being able to secure the services of Messrs. McKim, Mead & White. These gentlemen, as architects of the Agricultural Building, were thoroughly familiar with the conditions governing the erection of the exposition structures, and made the execution of the work committed to them a matter of State as well as professional pride. The plans were finally approved May 4, 1892, after being amended in harmony with the suggestions of the board, and specifications were ordered to be prepared in conformity with them.

For the purpose of opening bids and awarding the contract for the erection of the State building, a meeting of the board was held in Chicago on June 3, 1892. The lowest bidders were found to be the George A. Fuller Company of Chicago, and a contract was accordingly

made with them. As the symbol and embodiment of the official presence of the State at the World's Fair, the design of the building was necessarily the subject of a great deal of thought on the part alike of the Board of General Managers and the architects. New York had at least this advantage in coming in late — the plans of the States that were to be its neighbors had been fully determined. It was found that these had been affected entirely by local historical associations, and it was evident that if New York were to follow their lead the result would be a kind of architectural conglomerate, in harmony neither with itself nor the carefully considered scheme of the great exposition structures. In point of fact, there were more failures than successes in Jackson Park in the attempted reproduction of historical buildings in unfamiliar surroundings, and in the opinion of all discriminating critics, New York did wisely in refusing to join in this competition. The State had a magnificent opportunity presented to her in the conspicuous site reserved for her occupancy, immediately opposite the center of the Art Building, a distinction in which Pennsylvania alone shared. It was, therefore, decided to associate the State building in its architectural design rather with the main exposition than with the unrelated congeries of State headquarters. That point being determined, the selection of the style of the Italian Renaissance naturally resulted; for, besides opening up the widest range of opportunity in treatment, it assured for the building a monumental and dignified character, adapted alike for reception purposes and summer occupation. The next step was to find a type which would best fulfill all the requirements of the case. For many reasons, that of the Villa Medici, with necessary modifications, was adopted, its royal accessories suggesting an appropriate headquarters for the Empire State, no less than a striking architectural foil for the noble proportions and outline of the Art Building opposite.

In thus establishing the relation of New York State with the main enterprise, and by giving its building something of the monumental character in scale and other attributes which made the external side of the exhibition what it was, it is not intended in the least to disparage the excellent and creditable representation of several of the States in their buildings. But for the very reason which gave the chief structures of the fair their artistic unity, namely, a policy agreed on in advance and closely adhered to in the case of the Court of Honor, where all the buildings were constructed under certain restrictions, the

absence of such policy or cohesion and agreement upon the part of different States made it a foregone conclusion that the treatment of the territory alloted to the States must result at the best in architectural confusion. Through the employment of the style of Italian Renaissance, it also became possible to make use of the roof as a garden, with pots and shrubbery, from which a commanding view of the lake and surrounding exhibition (enjoyed by none of the other buildings) could be obtained.

The area of the State building was 14,538 square feet exclusive of terrace and porticos, which covered an additional area of 3,676 square feet. The length of the building proper was 154 feet, and, including porticos, 214 feet. The depth of the main building was 89 feet, and, including terraces and steps, the extreme depth was 142 feet. The height of the building from grade to cornice was 63 feet 2 inches, and to the apex of the tower roofs, 96 feet. The roof, consisting of two platforms surmounted by belvèderes, covered an area of 14,000 square feet, and was reached by an elevator from the entrance hall of the building. The external aspect of the building, while in the main based on the lines of the Villa Medici, varied radically from it in many points. First, in the grand staircase and terrace at the main approach; second, on the line of the first floor in the circular porticos flanking the state apartments at east and west; third, in the detail of the building throughout, especially the frieze of boys bearing garlands, taken from the Farnesina palace, other details from the Spada palace; and again, in the roof, which, barring the belvederes, was wholly flat. This roof was furnished with earthenware jars brought over expressly from Naples and Perugia. These jars weighed from 60 to 600 pounds each, and are identical with those used on every Italian villa and many of the palaces from Genoa to Naples. The importation of these great flower pots was the first considerable one ever made to this country and formed one of the greatest embellishments of the building, and they were immediately copied by the main exhibition in staff, as the chief adornment of the terrace balustrade in the Court of Honor.

In the modeling of the details of the external ornamentation of the building, the best museum examples were carefully followed so as to secure correct style. At the main entrance were four Roman candelabra reproductions from the museum at Naples, and from the Barberini palace in Rome were taken two designs in antique sculpture from

which were modeled the lions that formed a separate and interesting feature of the building. The original sculpture referred to is built into the walls on the landing of the staircase of the Barberini palace and represents a lion in high relief but lacking the right shoulder, one of the fore paws and being otherwise incomplete. Notwithstanding these defects, it never fails to fill the beholder with awe, and give the impression of a degree of power and repose not seen in any of the other lions of the Renaissance. That this lion has not been widely copied is undoubtedly due to the fact that it has always belonged to a private family, but through government influence the architects were enabled to have an actual cast made of the original in 1891, which reached America shortly before the New York State Building was designed. The cast was later presented to the board and furnished the sculptor, Potter, at once with an inspiration and an opportunity. After supplying the lost portions of the Roman original, he turned it into the round and then modeled for the completed lion a mate, differently posed but strictly in consonance with the treatment and tradition of the Roman sculptor. The extreme difficulty of the task of making both lions appear to be the work of the same sculptor was only equalled by the success with which Mr. Potter conquered it.

The monumental scale of the building made its facade most impressive. The height to the clere story roof line was seventy-seven feet five inches, the height of the deck floors between the belvederes was eighty-one feet, and the height of the floors of the belvederes was eighty-three feet above grade. The Italian heights of the stories differing in their greater loftiness from those most familiar to American eyes, lent a certain majesty to both exterior and interior effect. The general character of the building was sumptuous rather than florid and suggested a semi-public rather than a domestic use.

The main floor of the building consisted of a vestibule measuring on the pavement forty-six feet by seventeen feet six inches, and being thirty-three feet ten inches high; of an entrance hall eighty-four feet long by forty-six feet deep and twenty feet six inches high; of a grand staircase hall forty-six feet by thirty-seven feet, with a dome ceiling forty-six feet high; of a suite of three drawing rooms on one side and three reading and writing rooms on the other. The architecture of the vestibule or loggia, while presenting on the street the Medician motive, suggested in its ceilings and end walls the Villa Madama, another of the outlying Roman villas, its niched fountains being like those in the

MAIN ENTRANCE, STEPS AND VESTIBULE

garden of the Villa Madama, consisting of highly elaborated mosaic, Pompeian in composition and color, and recalling the designs of Giulio Romano. This latter part of the work was confided to Messrs. Herter Bros., and carried out by them with great skill and artistic feeling.

Reaching the entrance hall, a pillared chamber of approach to the main suite of rooms on the east and west, it was interesting to note that from this hall access was had directly to all parts of the building, including the roof, the grand staircase in the center, the approach to the roof garden, the coat rooms and lavatories on the left, the service offices of the building on the right, and upon the opposite side of the hall post and telegraph offices, as well as the private office of the board. Standing in the center of this hall one could command the whole length and depth of the building from portico to portico, whose wide expanse proved none too large for the constant crowds for which it was intended. In this hall was placed a mosaic pavement of brass reliefs from designs by George Maynard of the "signs of the Zodiac," inlaid in marble, and carried out by John Williams, Tiffany's metal worker, and presented by him as an exhibit. This work of art has since been secured by the new Boston Public Library to be inlaid in its floors.

In the women's state apartment or drawing rooms were three features of particular interest — the damask silk, copied in France from a Venetian fragment taken from an old palace in Venice, and brought from Venice by Mr. McKim in 1891; and the two chimney pieces, exact reproductions in Sienna and statuary marbles of early Italian Renaissance originals in the Metropolitan Museum, kindly lent for this purpose by General di Cesnola, and furnished and set without cost to the board as an exhibit by Messrs. R. C. Fisher & Co.

The decoration of the walls of the staircase leading from the lobby to the banquet hall was principally an adaptation of Pompeian decorations combined with original designs, in the same spirit, by C. C. Coleman, of New York, under whose direction the work was done. The color of the walls, which were divided into panels, represented in general effect large surfaces of rich Pompeian orange red. Each panel was enriched by bands of orange and cream white lines, flanked by elaborate bands of arabesques interspersed with animals, cupids, floral designs, etc. Masks, vases and small painted pictures were introduced here and there wherever they would help the composition and general

effect. Mythological groups formed the principal features of the center decoration of each field or panel.

The decoration of the frieze above the panels and under the cornice, and above and between the columns at the foot of the stairway was composed of garlands of flowers and fruit held up by masks and rosettes, all painted upon a cream white ground. The ornaments in mouldings of the arched ceiling overhanging the stairway, as also those of all the cornice work, and the capitals of the columns, and pilasters on the side walls were picked out in colors of blue, yellow and red to harmonize with the rest of the decoration. The spaces between the mouldings of the arched ceiling were of a cream white surface against which were painted groups of flying figures with bandrols in imitation of ancient stucco relief work. The base supporting the large fields of Pompeian red from the beginning of the staircase to finish was of a blue black color against which were painted, growing out of the steps as it were, rich masses of narcissus, a favorite flower of the ancients and often depicted by them in mural decoration.

The second floor contained the banquet hall in the center, the executive offices of the Board of Women Managers on the right together with their reception and tea rooms. On the left were the executive office of the Board of General Managers and the relic room, richly furnished with antiques and curios.

The banquet hall, which occupied the central portion of the second floor, was of such magnificent proportions as to afford an opportunity for the finest artistic effects. The decoration was intrusted to Frank D. Millet of New York. The hall was intended as a ball room and reception room as well as banquet hall, and was, therefore, bound to be of sumptuous character. Its details were all Italian of a later period, specially selected for their richness and exuberance. The design was original and not taken from any particular hall. The prevailing tone was cream white relieved with gold and interspersed with other harmonious tints wherever the treatment of the panels, columns and arches would warrant it. The effect produced was of the highest beauty, worthy of Mr. Millet's best efforts, and was conceded to be the finest example of interior decoration in Jackson Park. In the ceiling was the masterpiece of the room, a large painting on canvas by Mr. Millet. The theme was an allegory of the Empire State encouraging the arts and sciences. The State is represented by the goddess Juno, Queen of Heaven, seated among the clouds on a golden throne, attended by a peacock, the bird

consecrated to this goddess. In her right hand she holds the staff-like scepter with which she is usually figured, and in her left a palm branch, significant of the peaceful character of the ceremony, while from an altar there rises a thin cloud of burning incense, which floats around her sacred person. Three cupids strew roses in front of the throne and in the path of the approaching figures. Directly in front of the goddess, and heading the group, is a youthful couple, the maiden in an attitude of respectful homage leading by the hand a timid youth, representing Literature presenting Art to the consideration of the Queen. Behind Art and Literature Science is seen ready to advance with her claims to recognition, while Military Valor, Agriculture, Commerce, Statesmanship, the Science of Medicine and the Goddess of Fruits await their turn to receive their reward. Music, having finished a strain of rapturous melody, is about to rise to pay homage with the rest. This fine mural painting attracted much attention, and at the close of the fair was brought to Albany and will be placed in the Capitol.

One of the most pleasing features connected with the decoration and furnishing of the State building was the public spirit and loyalty with which many New York firms offered to place at the disposal of the State as an exhibit such articles as they could furnish. Many of these offers were accepted. The carpets, antique rugs, draperies, portieres, hangings and other furnishings of the building carried out from special designs furnished by the architects were provided by W. & J. Sloane, of New York city. The antique furniture, including cabinets, tapestry and luxurious French and Italian models of the sixteenth and seventeenth centuries which adorned the reception rooms on either side of the banquet hall were given by Duveen Bros., of New York city. Three seventeenth century Italian tapestries in the banquet hall were particularly rare and costly, and one of them was valued at $6,000. A very magnificent and artistic group of electric light fixtures specially designed by Mr. E. A. Caldwell of the Archer & Pancoast Manufacturing Company was a prominent feature of the building. The fine wrought-iron gilded balcony railings of the private boxes in the banquet hall were executed as an exhibit by John Williams of Tiffany & Co. after designs furnished by the architects.

The landscape paper in the Board of Women Managers' reception room was imported specially for the room by Fr. Beck & Co., of New York, and the same firm did much to assist the character of the build-

ing by their work in other rooms. The Duparquet Huot & Moneuse Company presented the range and serving pantry to the building, and the Lorillard Refrigerator Company furnished all the necessary refrigeratory appliances. The pride with which a structure so superbly planned and equipped was calculated to fill every New Yorker visiting the fair was greatly enhanced by this demonstration of the generous rivalry of private firms to imitate the public liberality which dictated the policy of the State towards the exposition.

The third floor contained several private rooms used by the chief executive officer and employees of the commission, and here also was the private dining room of the building reserved for the use of the attachés of the commission and their friends. Towards the latter part of the season the restaurant facilities were increased, and any New Yorker could obtain admission to its privileges by applying to the office for a card of introduction.

The New York State Building was in no sense a repository of exhibits. The few relics and curios in the building were more for the purpose of decoration than exhibition. It was designed as a convenient and comfortable club house for New Yorkers, where they might rest, obtain information, entertain their friends and imagine themselves once more on the soil of the Empire State. The building was at once recognized as the only one on the grounds properly arranged for the entertainment of social and official gatherings and was in constant demand not only by New York people but for national, foreign and other State assemblages. It was an unexpected turn of affairs but none the less satisfactory to our State pride that New York was thus virtually the hostess of the exposition.

The management of the State building was under the supervision of Mr. Louis Meredith Howland, of the Board of General Managers, in whose capable hands the social and official functions at the building were conducted with the greatest possible success.

Following is the list of functions held at the New York State Building during the exposition:

June 2.— Reception to Governor Flower by Board of Women Managers.

June 20.— Reception to Governor Fishback, of Arkansas (informal, by Women's Board).

July 12.— Reunion of the American Society of the "Knights and Ladies of the Round Table."

BANQUET HALL

July 13.— Reception to "Harper's Young People."
July 13.— Banquet of New York Life Insurance Company.
July 18.— Reception to the Emma Willard Association by Mrs. Russell Sage.
July 18.— Reception to Secretary and Mrs. Carlisle by Board of Women Managers.
July 20.— Reception and banquet of united Greek letter societies.
July 20.— Dinner of American Library Association.
July 25.— Reception to Dr. Sheldon by Oswego Normal School Alumni.
July 25.— Concert in aid of "Cold Storage fire" fund.
July 26.— Reception to New York Association of Commercial Travelers.
July 27.— Reception to Brooklyn representatives by State board.
July 27.— Banquet to Mayor Boody.
July 29.— Reception to Colonel and Mrs. Fred. Grant.
Aug. 4.— Reunion of Scottish assembly.
Aug. 21.— Reception to West Point cadets.
Aug. 21.— Banquet to Commandant and officers of West Point cadets.
Aug. 22.— Ball for West Point cadets.
Aug. 23.— Banquet given to Buffalo committee by Board of General Managers.
Sept. 4.— New York Day reception and ball given by Board of General Managers.
Sept. 5.— Reception given by the Chicago society, "Sons of New York."
Sept. 6.— Banquet of foreign commissioners to railroad officials.
Sept. 7.— Banquet and ball to Army and Navy officers on duty at the exposition.
Sept. 8.— Entertainment by Japanese dancers to foreign and State commissioners.
Sept. 22.— Banquet by National Typothetæ.
Sept. 26.— Banquet given Sovereign Grand Lodge of I. O. O. F., by the Illinois members.
Sept. 27.— Reception and supper of the Patriarchs Militant I. O. O. F.
Oct. 11.— Brooklyn "Eagle" reception.
Oct. 14.— Mrs. Huntington's "kitchen garden" reception.
Oct. 19.— World's fishery congress banquet.
Oct. 21.— Manhattan Day reception.
Oct. 21.— Lunch to General Miles and distinguished New Yorkers.
Oct. 24.— Mary Washington tea party (in costume).
Oct. 28.— Farewell banquet of State commissioners.
Oct. 29.— Electricians' dinner.

In addition there were innumerable private dinners and receptions, and, under the management of the Board of Women Managers, informal teas were given every afternoon at five o'clock throughout the season, except when interrupted for a time by the death of Senator McNaughton.

Of the functions directly under the control of the Board of General Managers perhaps the most elaborate and successful were New York Day reception, Manhattan Day reception, Army and Navy banquet and ball, West Point cadets ball, Japanese evening, and the Benefit Concert in behalf of the sufferers by the fire on the exposition grounds. At this concert such eminent artists as Max Bendix, Senora Cervantes, Bicknell Young and Emma Thursby kindly offered their services. About $500 was added to the firemen's fund from the proceeds.

The banquets and receptions of the various societies, such as the Odd Fellows, Scottish assembly, Typothetæ, etc., were naturally of a more restricted character, and in charge of the society officers. The Board of General Managers uniformly tendered every courtesy and convenience possible to the visiting societies, and the following extract from the minutes of the Chicago Typothetæ, November 2, 1893, is a fair example of the many acknowledgments made in return :

WHEREAS, the Chicago Typothetæ being under obligations to the commissioners of the State of New York to the World's Columbian Exposition for many favors extended them during the session of the National Typothetæ of America in this city ; therefore, be it

*Resolved*, that the Chicago Typothetæ, speaking as well for the National Typothetæ of America, express to the commissioners of the State of New York their hearty appreciation of the graceful courtesy that placed the New York State Building at their disposal on the night of September 22, 1893. Its magnificent banquet hall, typical of the richness of the Empire State, nobly housed our guests, while the kindly interest of Mr. Louis Meredith Howland, commissioner in charge, and his able and genial assistants, made us all, gathered from many States, feel that we were sons of the Knickerbockers, welcomed to our own.

## GOVERNOR FLOWER'S VISIT.

On June first Governor Roswell P. Flower visited the exposition, and remained about ten days. It was not an official visit, and the Governor devoted nearly all of his time, in company with Chief Executive Officer McNaughton, to a comprehensive inspection of New York's exhibits.

He expressed himself as delighted beyond measure at the magnificent showing made by the Empire State, and declared it to be a duty incumbent on every New Yorker who could possibly afford it to make the journey to Chicago, not only for the fair as a whole, but to view the unexcelled presentment of New York's resources. Governor Flower was the steadfast friend of the New York exhibition from its inception. As Congressman he had fought valiantly to have the fair located in New York city. As Governor he supported every worthy plan for the advancement of New York's interests, and rendered specially valuable service by his advocacy and prompt approval of the second appropriation bill.

His speeches throughout the State during the summer and autumn of 1893 contained many complimentary allusions to the New York display, and greatly increased public interest in the exhibits. Notable were his comments before an educational gathering in the Potsdam Normal School, June 27, 1893.

We sometimes have to go away from home to find out how great we really are as a people. It was something of this feeling which impressed me as I went about the various buildings on the exposition grounds and studied the exhibits of different States and countries. Every New Yorker must feel proud, as I did, at the splendid showing the Empire State has made. In every department of art and industry New York's supremacy is at once revealed, and is generally recognized.

The first building I entered after inspecting the New York State Building was the Woman's Building, and I was taken to a handsome library which they told me comprises 5,000 volumes written by women, and over 2,500 of them contributed by the brains of the women of New York State. So it is throughout the entire exposition — New York supreme everywhere.

The most conspicuous thing in her educational exhibit is the most suggestive thing of the entire exposition. It tells the story and gives the reason of her greatness. It is a broad, long map of the State, covering a generous portion of the wall, and dark with black disks. Every disk stands for a school house, and there are 12,000 of them. Nothing in all the exposition is more impressive than that map with its black disks. There is no county in the State not thickly sprinkled with them. It is the first time such a map has been made, and the credit of making it belongs to pupils of the high school at the capital of the State.

The next thing that strikes the eye in the department of education at the World's Fair is the extent of the New York exhibit. We are just

one-forty-fourth of the Union — only one State out of forty-four — but our educational exhibit occupies one-seventh of the whole space devoted to this department. No other State has so large an exhibit. No other State has its exhibit so nicely installed. You walk down one aisle and you see the representation of our great common school system of education — kindergarten, primary schools, grammar schools, high schools and trade schools — the great bulwark of our State. You walk down the opposite aisle and you see exhibited our elaborate system of higher education comprised in the University of the State of New York, academies, colleges, professional and technical schools and universities — a scheme of educational effort unequalled in scope by the educational system of any State, and copied many decades ago because of its excellence by the government of France.

Governor Flower refused all proffers of a public reception or banquet, but on June second an informal reception was tendered him at the New York State Building by the Board of Women Managers. Late in the season, at the time of the New York Day celebration, Governor Flower made an official visit to the fair accompanied by his staff and prominent State officials.

### Brooklyn Day.

The first of New York's special celebration days was on June twenty-seventh, which was devoted to the city of Brooklyn. An elaborate programme was arranged which included a speech of welcome by Chicago's mayor, Carter H. Harrison, a response by the mayor of Brooklyn, David A. Boody; speeches by Thomas B. Bryan on behalf of the exposition, St. Clair McKelway of the Brooklyn "Eagle," and Murat Halstead of the "Standard-Union." Music was furnished by the Arion Singing Society of Brooklyn. An amusing feature of the literary programme was the witty passage at arms between Mayor Harrison and Mr. McKelway on the respective merits of their two cities, in which the Chicagoan was badly worsted. In the afternoon at the New York State Building a reception was given the ladies of Brooklyn by Mrs. J. S. T. Stranahan, a member of the Board of Women Managers, and in the evening a reception and banquet was given Mayor Boody and other prominent Brooklyn representatives by the Board of General Managers.

Though State days, National days, etc., had been provided for, Brooklyn was the first city to appropriate a day and devote it solely to

GRAND STAIRCASE HALL

the celebration of her glories. Her example was followed later in the season by New York and Chicago.

### DONALD MCNAUGHTON.

During the latter part of July, 1893, the sickness and death of Donald McNaughton, chief executive officer of the State board, threw a shadow of sadness over the New York contingent at the fair and turned the State Building into a house of mourning. His health had been far from good for four months previous to his death. He had constantly devoted his time for a year to his duties as executive official of the board, planning and developing a thousand schemes for New York's advantage and oftentimes not leaving his office till eleven or twelve o'clock at night. In his restless energy and desire to see all things progressing well he took upon himself work which others might properly have assumed.

As a result of this continuous drain of nerve force a constitution naturally strong was so sapped that it was unable to cope successfully with disease. About the twentieth of June he had a slight attack of typhoid fever, but good medical attendance and proper care warded off the danger. Had he returned home and taken a complete rest for a month as urged by every one to do he would probably have regained his full strength, but no arguments could move him and he insisted on remaining at his post until too late for a retreat. He barely held his own for a time and towards the end of the month declined perceptibly. About the twenty-eighth of July an attack of peritonitis developed and though not of a violent nature proved fatal in his weakened condition and caused his death July 30, 1893.

Donald McNaughton was born of Scotch parentage in the town of Mumford, Monroe county, N. Y., March 29, 1830. His education was obtained in the public schools of his town, and at the age of sixteen he entered the milling business as an assistant clerk. After working his way up to superintendent of the mill, he resigned and began the study of law. He was admitted to the bar in due time and began practice among his fellow townsmen. Affable and popular from boyhood, he rose rapidly in their esteem and for eight years represented them in the county board of supervisors and was often their delegate to county and State conventions. In 1864, for his efforts in filling the quota of the township of Wheatland in the various drafts, he was presented by the citizens with a large law library. As his practice broadened he

removed his law offices to Rochester, though he always retained his old home in Mumford and spent his leisure hours there.

Mr. McNaughton at once became identified with the liberal and progressive public spirit which has developed the city of Rochester, and occupied many positions of honor and trust. He was secretary and president of the Rochester and State Line Railroad Company (now the Rochester and Pittsburg), a trustee of the Central Union Storage Company, a trustee of the Reynolds Library, president of the Scottish Society of Rochester, and secretary of the Wheatland Historical Society.

His first entrance into State politics was in 1887 when he was elected Senator from the twenty-ninth district, which is usually Republican by a large majority. In 1889 he was re-elected. His career in the upper house attracted wide attention, for though a member of the minority his popularity among his fellow members was so great that if a bill came heralded as "one of McNaughton's little bills" it rarely failed in passing. At the close of his senatorial career he had obtained a reputation for unimpeachable integrity and few of his colleagues were considered to have a brighter political future than he. A third nomination for the Senate was declined by him in 1891, as he wished to devote himself entirely to his law practice. In April, 1892, after the passage of the World's Fair Bill by the New York Legislature, Senator McNaughton was selected by Governor Flower for chief executive officer, as possessing in the highest degree the ability, popularity and creative energy necessary to place the New York exhibit in the front rank. To accomplish this in one year was an exacting task, but he bent to it every resource of his nature and sacrificed to its successful issue his time, his strength, and, as the sequel proved, his life.

Only one incident was allowed to interrupt his labors and this attested in a further degree the remarkable popularity of the man. Always a staunch Democrat, he was induced by his party associates to accept the nomination for Congress in the thirty-first district in the fall of 1892. The county of Monroe, which comprises this district, is strongly Republican, and gave the Republican presidential candidate in this election 3,621 majority. Senator McNaughton, though giving but little time to his canvass, was defeated by only 507 votes.

After the close of this "little recreation," as he termed it, his sole idea was the development of the New York exhibits; and when at the close of a year's arduous labor he saw his many plans put successfully into effect, it was with a feeling of intense satisfaction that he removed

his offices to the State Building in Jackson Park, and entered on the final stage of his career. That he was able to see with honest pride this part of his work done to the complete satisfaction of the thousands of New Yorkers who viewed the fair, and to the admiration and envy of his colleagues from other States, is gratifying to his friends. As chief executive officer of the New York board and with rooms in the State Building, which was specially designed for receptions and entertainments, Senator McNaughton was brought into constant relations with other State and foreign officers and charmed all by his genial manner and never failing courtesy. No more sincere expressions of regret and sorrow for his death were received than from these friends who had known him but so short a time.

Senator McNaughton never married, and as he had no brothers nor sisters was the last of his immediate line. Yet few men have been so widely mourned. His generosity, lavish to a fault, his kindness to all in need of advice or assistance, in addition to his other manly qualities, had raised for him a host of friends whose affection and regard were as strong as though based upon the blood bond. By his death New York lost an efficient and faithful public servant.

The Board of General Managers for New York State in closing this record of his life and services bear witness to the loyalty, ability and zeal with which he discharged the exacting duties of his position and mourn with his many friends his untimely death.

Memorial services were held in the New York State Building at noon, August 1, 1893, Rev. Simon J. McPherson, a life-long friend of the senator, officiating. Draped in black, the magnificent hall built for pleasure was a stately mausoleum, and emphasized with startling effect the uncertainty of life. Along the main avenue, where were situated the buildings of the States, flags were at half-mast and all signs of gaiety suspended. In the afternoon the remains were transferred to a private car, courteously tendered by the Michigan Central railroad, and accompanied by a delegation from the Board of General Managers and attachés, were conveyed to Rochester. From here a special train took with them a large assemblage of friends to Mumford, where the final burial rites were held in the village he had lived and labored in so long.

Before returning to Chicago, a special meeting of the Board of Managers was held, August second, at the Spring Creek Hotel, Mumford, and on motion of Mr. Howland, seconded by Mr. Thacher, the following preamble and resolutions were adopted:

WHEREAS, the services of the Hon. Donald McNaughton as chief executive officer of the Board of General Managers of the exhibit of the State of New York, have been terminated by death:

*Resolved*, that the board bear testimony to the absolute fidelity and unselfish devotion which have marked the discharge of his duties to the board by its late chief executive officer.

Collectively, and individually, the members of the board could not fail to be impressed by the energy, earnestness and singleness of purpose with which, from the hour of his appointment to the very close of his life, Mr. McNaughton did his work of providing for the representation of his State at the Columbian Exposition. Dying literally at his post of duty, and with its requirements never absent from his mind, this faithful steward of the responsibilities committed to him by the Governor of the State, must remain an example of all that is highest and most worthy of imitation in those exercising the authority of public office.

*Resolved*, that copies of these resolutions be sent to the Governor of the State of New York, to the Mayor of the city of Rochester, and to Mr. Oliver Allen, of Mumford, N. Y.

On July thirty first, at a meeting of the National Commission in the Administration Building, the following resolutions, which were introduced by Hon. John Boyd Thacher, were adopted:

WHEREAS, by the inscrutable decree of Providence, the Hon. Donald McNaughton, chief executive officer of the Board of General Managers of the exhibit of the State of New York at the World's Columbian Exposition, has been suddenly taken away in the midst of his earnest and arduous labor for his State on behalf of the exposition:

*Resolved*, that the World's Columbian Commission, recognizing the intelligence, energy and self-sacrificing zeal which Mr. McNaughton brought to the discharge of his duties and the brilliant results of his labors which are manifest wherever New York is represented at the exposition, tender to the Board of General Managers of the exhibit of that State their sincere condolence and most profound regret at the loss of an officer so capable, faithful and conscientious.

*Resolved*, that the secretary be instructed to forward a copy of these resolutions to the Board of General Managers of the exhibit of the State of New York.

The New York State Building was thrown open to the public on the day following the funeral, but all receptions and afternoon teas were omitted until August sixteenth. During the sickness of Senator

ENTRANCE HALL, Looking West from Reading Rooms

McNaughton and the interim between his death and the qualification of his successor, the work of the chief executive officer was ably performed by his confidential secretary, Mr. John H. Reynolds, and the financial secretary of the board, Mr. George S. Stevens.

On August fourth Governor Flower appointed as chief executive officer ex-Senator John Foley, of Saratoga Springs. Mr. Foley is prominently known in legal circles throughout the State, and was for many years district attorney of Saratoga county. He was a member of the fifty-sixth Senate with Mr. McNaughton, and like him elected as a Democrat in a strong Republican district. To step into the field at this late day, unfamiliar with all details, and take up the work where Senator McNaughton left it, was a delicate and difficult task; but the result justified the confidence reposed in him by the Governor. His popularity and ability, combined with a high degree of executive firmness, made him particularly well fitted to bring the affairs of the board to a successful close.

## WESTERN NEW YORK DAY.

The week of August twentieth to twenty-sixth included many features distinctively New York's. The West Point cadets were in camp on the plaza before the Government Building and attracted universal admiration for their soldierly bearing, accurate drill and gentlemanly conduct when off duty. On Monday a reception was given Colonel Mills, the Commandant, and the cadets at the State Building. On Tuesday, the twenty-second, a grand ball in their honor was also given in the New York Building, which was attended by the prominent officers and society people at the fair and in the city.

August twenty-third was reserved for Western New York, and over 4,000 people from Buffalo, Rochester and other cities and towns came in special trains. An attractive programme had been prepared, and the low rates and excellent arrangements made by the local committee induced so large a delegation to come. In the banquet hall, at four o'clock in the afternoon, Mayor Carter Harrison of Chicago welcomed the Buffalonians in one of his witty and characteristic speeches. Mayor Bishop of Buffalo responded on behalf of his constituents, and the Hon. Thomas B. Bryan of Chicago delivered the oration of the day. In the evening a banquet given by the New York Board of Managers to the Buffalo committee pleasantly terminated a most interesting day. Covers were laid for forty-two guests, and Senator Foley, as presiding officer, called out many bright impromptu speeches by the toasts he

proposed. The banquet was informal and one of the most enjoyable of the season.

## NEW YORK DAY.

September third was selected early in the spring for New York day, because of the historical significance bestowed upon it by Henry Hudson when, on the same date in the year 1609, he first dropped anchor in the sheltered waters of New York bay. The energetic Englishman in command of his Dutch vessel was an accidental navigator of the beautiful stream named in his honor, and as his restless sail urged his vessel onward the beauty of the Palisades and the romantic grandeur of the Highlands caught but a passing exclamation of surprise, for his heart beat only for one purpose, his eyes sought only for one vision, the inland sea whose waves should bear him to the shores of coveted India. But from the failures of one often come the victories of the many. When at the head of navigation he disappointedly turned his vessel's prow to the southward, no one could foresee that the first step had been taken in the development of a highway of commerce which, including New York's vast area, should extend to the great lakes, to Chicago, to the upper waters of the Mississippi and the great wheat fields of the Northwest, laying under tribute a country ten-fold richer than the India for which he sighed.

The more the history of the voyages undertaken to discover a short northern route to Asia is studied the more we are compelled to agree with Dr. Asher, one of the biographers of Hudson, that these ventures, in spite of their fruitlessness, belong to the most important events that history records. To them England owes her American discoveries and colonies, her sway of the ocean, her fisheries of cod and whale, her transatlantic and northern trade; in short, that progress by which from a kingdom of very limited power she has risen to the first place among the empires of ancient and modern times. It is to the consequences of these same apparently fruitless undertakings that the United States owe their existence, the Dutch their freedom and glory, the Russians their connection with the west of Europe. When we consider what the fate of Europe would have been without the victory of England and the Netherlands over Spain we may almost be justified in placing the importance of the early northern voyages even above that of Columbus' magnificent discovery.

It was, therefore, an event of international significance, as well as the glory and honor of the Empire State, that was celebrated by New

York's representatives on September third, or, more accurately speaking, on September fourth, since the anniversary day fell on Sunday.

Over 160,000 people were on the grounds during the day, and a fair percentage of them wore the purple and gold badges of the Empire State. Among New York's official representatives were Governor Roswell P. Flower and staff; Hon. Frank Rice, Secretary of State; Hon. Frank Campbell, Comptroller; Hon. Elliot Danforth, State Treasurer; Hon. Simon W. Rosendale, Attorney-General; Hon. Martin Schenck, State Engineer and Surveyor; Hon. Austin Lathrop, Superintendent of State Prisons; Hon. James F. Crooker, State Superintendent of Public Instruction; Hon. William Sulzer, Speaker of the Assembly; the General Managers of the exhibit of the State of New York, District Commissioners and members of the Board of Women Managers.

At eleven o'clock the banquet hall and auditorium of the State Building was crowded with New Yorkers and invited guests.

## MR. DEPEW'S SPEECH.

As president of the Board of Managers of the exhibit of the State of New York the Hon. Chauncey M. Depew made the opening address. He spoke as follows:

*Governor Flower, Ladies and Gentlemen:*

Two hundred and eighty-four years ago yesterday Hendrik Hudson cast anchor inside of Sandy Hook. Though not so fortunate as Columbus, he possessed in equal measure the qualities which won success and fame for the discoverer. No sailor ever entered upon voyages so venturesome with such limited resources and meagre equipment. His skill and daring, his courage and faith, carried a shallop and scanty crew where a modern steamship could hardly go. He reached nearly the highest point yet attained beyond the Arctic circle. He tried every bay and inlet in the effort to pierce the icy barrier of the frozen North. He breasted the mountainous waves of Labrador and the storms of the New England coast, and then rested in the harbor of New York. Columbus sought to carry his religion to the heathen and find the gold of the fabled El Dorado, but Hudson sailed in the interests of the expanding commerce of the world. It was the belief of his times that a shorter passage to India would increase the trade and wealth of nations. The Orient was supposed to possess boundless riches for the Occident if shorter and cheaper channels of communication could be opened. The commercial energies of

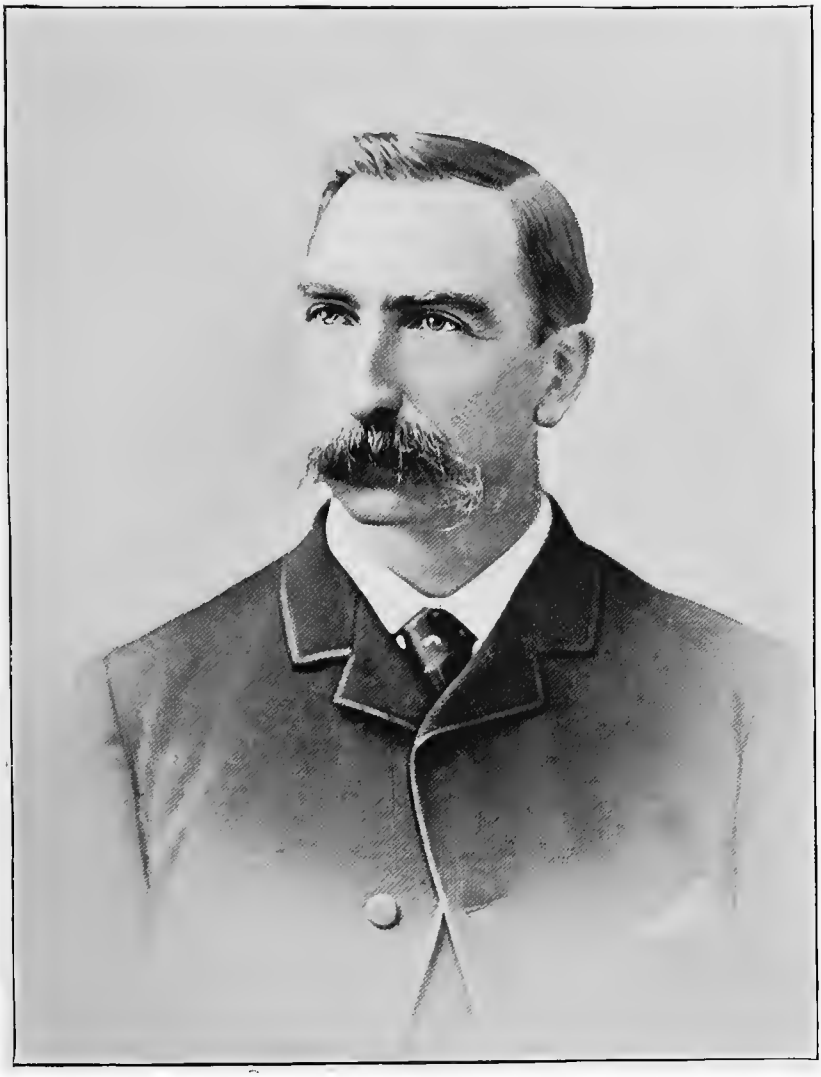
Europe were devoted to this quest during the fourteenth and fifteenth centuries.

It was reserved for our time to supply through the Suez canal the passage to the Indies which Hudson vainly tried to find. The event was important to international trade, but not one of the inestimable blessings of our race. It augmented the power of the British empire and opened the interior of India to the enterprise of the West, but it added little to the happiness and liberty of mankind. Hendrik Hudson failed to find a northwest passage to India, but he did discover the passage from the Atlantic ocean to the northwest. It was of infinitely greater importance than the object of his search.

It is the history of all great actors and thinkers upon the world's stage that they builded better than they knew. When the glorious bay, with its superb harbor and noble river, enchanted the navigator he little dreamed of the significance of the Hudson, which should forever bear his name and perpetuate his fame to the settlement and development of the American continent. He had found the only depression in the mountains through which the ocean could be wedded to the lakes. He had brought the western wilderness within the reach of the emigrant, and found its fertile fields for the seeds of empire.

The opening of the Suez canal and bringing Europe and India in closer relations was an event. The discovery of the Hudson river was an epoch. A great and growing Commonwealth on the border of the lakes, filled with millions of people, who in fleeing from other lands have found liberty, happiness and home, is among the results of his discovery. It has incalculably increased the material, moral and intellectual welfare of the human race. It has made possible the strength, the power and the perpetuity of the republic.

Hendrik Hudson discovered Chicago. This city is as much indebted to him as New York. His deeds gave the opportunity and furnished the incentives which have created this present and potential capital of the West. The genius of commerce brought Hendrik Hudson to New York, and when he sailed away she made the island of Manhattan her home. In due time, through Fulton and Livingston, she applied steam to navigation upon the waters of the Hudson and revolutionized the relations of the trading nations of the earth with each other. Through Morse she brought electricity to the service of man and belted the globe with lightning to carry the messages of commerce and peace. It has been the experience of all the ages that the highest results of expanding civilization were always to be found along the public highways of the world. Upon their borders and within the area of their influence great cities were



JOHN FOLEY, Chief Executive Officer

founded and empires developed. There learning and the arts flourished and humanity had both opportunity and ambition for the highest intellectual development.

The "Half Moon," upon which Hendrik Hudson stood as she entered our harbor, was a Dutch ship with an English captain and a crew of many nationalities. She fitly typified the hospitable and cosmopolitan character of the future metropolis and the coming Empire State. She represented that genius of commerce whose handmaidens are civil and religious liberty. The witches of New England fleeing from the hangman and the scaffold found welcome and shelter in tolerant and liberal New York. The same spirit continued down the years, brought the Yankee over to dispossess the Dutchman from political power and the Irishman to dethrone the Yankee, and the German, the Scandinavian, the Italian, the Frenchman, the Russian, the Dane and the Spaniard to enjoy the equal benefits and the unequaled opportunities of the great city and State of New York.

This cosmopolitan town, while it is the first of American cities, yet has more Irish than any city in Ireland, more Germans than any city in Germany save Berlin, and enough Italians to equal the population of the second class cities of Italy. We should fail properly to celebrate the day if we did not pay tribute to those emigrants from Holland who founded the State and left upon it the indelible impress of their spirit and principles. It has been the misfortune of the early Dutch settlers that the genius of Irving ran riot in a humorous history of their habits, occupations and achievements.

I have said that great leaders and thinkers have always builded better than they knew. There is one exception — the fathers of the American republic. The works of Washington and Jefferson, of the Adamses and Hamilton, of Jay and of Madison show that, notwithstanding the discouragements of their surroundings and the narrow basis upon which they were organizing their republic, they anticipated without dreaming of the results which would follow steam and electricity, a nation possessing the powers, the population and the attributes which belong to the United States of to-day. Of those constructive statesmen there was one of such marvelous, such precocious, such commanding genius that he stands easily at the head of the intellectual giants of his own age, with hardly a peer in any age. The impress of Alexander Hamilton is upon our Federal Constitution, in our judicial system, and pervades the whole of our fiscal policy. He fitly represented and with consummate and commanding ability the spirit of New York. She never has been narrow, never sectional and never has put her State flag and State interests in advance of the interests of the republic. She has always believed and acted upon

the belief that the preservation of American liberty and the unequaled advantages of American opportunities could only be had and enjoyed in the preservation of the American union.

New York is here to-day celebrating her day, claiming the elements which constitute her glory, but only in that spirit of friendly emulation which recognizes the merits of every one of the sister Commonwealths.

We are here in this building with its admirable architecture, its artistic finish and hospitable dimensions. We are here with our arts, our agriculture, our manufactures, the products of our mines and our forests, the illustrations of our educational system and of our general progress, to explain to the other Commonwealths and to the world why it is that we enjoy and retain and will continue to hold the proud position of the Empire State of the American Union.

We are here with our Governor to say to the country and to the representatives of other nations that we have done our best for the excellence and success of this great exhibition. It will be the distinguishing feature of this century that in its last years and dying hours there gathered upon the borders of Lake Michigan such a display of the beneficent results of peace and good will among men in promoting the happiness of mankind and the welfare of all people as no other age has ever seen. May its example be felt in every department of industry, in the realm of diplomacy, and in the expansion of liberty during the twentieth century.

I will now introduce a New Yorker; a New Yorker of New York; one to the manor born and with some old Dutch blood in him. He is New York itself, officially, Governor Flower.

## GOV. FLOWER'S SPEECH.

Gov. Flower spoke as follows:

*Mr. President, Gentlemen of the Commission, and Fellow-citizens of New York and other States:*

We came here nearly a year ago, representing the Empire State, to dedicate this building to the purposes of the exposition. We brought with us our best wishes for the great success of the national enterprise, and we pledged our best efforts for the accomplishment of that end. To-day we have returned to witness the result of your labor and ours — to celebrate a triumph made possible by the stupendous enterprise of this western metropolis and shared without jealousy by the people of the entire country. If upon this occasion, devoted particularly to the celebration of New York achievement, we congratulate ourselves also on New York's part in the work and the triumph, our fellow-citizens of other States

will, I am sure, indulge us in our felicitations and justify our enthusiasm, for they cannot have seen much of this fair if they have not detected the prominent place which New York has taken in it.

This whole magnificent and unrivaled exposition has been held to commemorate the discovery of Columbus that opened a new world to civilization and a new home to freedom. It is, therefore, fitting that the day which the Empire State has chosen as her own at the exposition should mark the date in her history which connects her with the achievements of another great navigator. It was on the 3d of September, 1609, that Henry Hudson, in command of the "Half Moon," dropped anchor inside of Sandy Hook and began that memorable exploration which prepared the way for coming commerce and marked the path by which was to be developed the future wealth and greatness of the State of New York. It was a short cut to the Indies that Hudson sought. It was a highway into the heart of a new continent, destined to become richer than the Indies, that he found. Baffled and disappointed, a victim to the treachery of his own crew, Hudson died, leaving the profitless search for a northwest passage to Asia to serve as a lure for adventurous navigators for full 200 years more. But the commerce for which he prepared the home at the mouth of the noble river which bears his name was not long in becoming a solid fact, and it is to-day one of the most notable manifestations of human enterprise on the face of the globe.

There is abundant evidence of the extent and variety of the trade of New York to be found in the contents of the beautiful buildings in this park. Out of all the 176 groups of the exposition classification there are very few in which some New Yorker does not exhibit, and in most of them the New York exhibits fix the standard of the display. Representative firms from New York are in the front rank of exhibitors in every commercial department of this exposition; the artists of New York stand for the major part of American achievement in painting and sculpture, and the State has come in as an exhibitor here on a scale worthy of its imperial status. I had occasion to say in this building, October twenty-second last, that New York would join this congress of nations, bringing the best she has of the bounty of nature and the art of man. I outlined the character of the display which the State proposed to make in seven of the great departments of the exposition, and I am happy to say we have been able to do all and more than all that we promised. There is no more complete and carefully classified presentation of the farm products of any State than is to be found in the New York pavilion in the Agricultural Building. It has been a revelation to the western visitor to find how vast and varied is the range of the field crops of New York, and how well fitted most of

them are to stand comparison with the very best which the country has to show. From its cereal crop to its tobacco, from the beans in whose production it excels all the rest of the Union to its hops, its flax and its grasses, New York's display of agricultural wealth has been among the surprises of the exposition.

In the Agricultural Building New York has also made a unique exhibit of apiculture. Here may be found several colonies of bees actively at work and passing in and out of the building to bring their spoil from the flowers of the Wooded Island, or of the parks and fields far beyond the limits of the exposition. Here, too, may be seen the fruit of the labors of the bee from the comb all through the series of its ingenious conversions into articles of food or medicine. As the greatest dairy State in the Union New York has an exhibit commensurate with the importance of its butter and cheese product, and the 9,000,000 pounds of its annual wool clip do not lack adequate representation. The native and naturalized trees of this State have never been shown as they are here. It is equal to an education in forestry to study the transverse, radial and tangential sections of the trees of New York represented by 106 species and illustrated by photographs and pressed or artificial specimens of leafage, flower and fruit. And if the pre-eminence of New York in the production of fruit and flowers has ever been doubted, it will not again be called in question after seeing the long procession of her garden, greenhouse and orchard growths, which has unfolded itself here from week to week and month to month. In the scope, beauty and extent of its floral display New York has been admittedly first among the States. It has planted an old-fashioned flower garden and it has made a fine orchid display. From the great bay trees at the main entrances of the horticultural building to the aquatic plants in the basin of the fountain, from the fancy beddings which it has kept filled at the side of the building to the roses and rhododendrons on the Wooded Island, New York is represented everywhere that there is foliage or bloom in the beautiful park before us. Of all the fruits grown in this country, save only the semi-tropical kinds, New York has shown a greater number of varieties than any other State, and of grapes and their products it has made a showing worthy of a Commonwealth whose grape crop has a higher cash value than that of any other in the Union.

Though New York does not rank as a mining State its mineral products are rich and varied. Its clay alone supplies the raw material for a brick industry worth $8,500,000 a year. Neither money nor pains have been spared to make an adequate display in the department of mines and mining, and the State has installed in its pavilion here a very fine exhibit

SUITE OF DRAWING ROOMS

of building stones, clays and sands, of limestone and marl, gypsum and brine and rock salt, iron ores, shale, graphite, feldspar, quartz, garnet and talc. The petroleum product of the State is represented as well as its world-famous mineral waters. It has erected an obelisk showing the whole series of its geological formations, and it has sent from the State museum a scientific collection of minerals, the result of years of careful selection and of the highest educational value. To the botanical exhibit it has contributed a rare collection of edible and poisonous fungi, and to the zoological exhibit that unique specimen known as the Cohoes mastodon and a collection of the land and fresh-water shells and of the mammals of the State. For an illustration of the aboriginal life of the continent, New York has sent representatives of the six tribes of the Iroquois confederacy with their "long house," wigwams, canoes and characteristic occupations, customs and ceremonies. The physical contour of the State is shown in the Mining Building in a superb relief map, and its canal system is delineated on another relief map in the Transportation Building. In the same section is the illustrative material showing the railroad system of the State in all its ramifications. By land and water New York remains what nature has made it — the gateway of the continent.

One-seventh of the entire space devoted to educational exhibits in the department of liberal arts is occupied by New York. At its entrance hangs a map which indicates the reason of this proud pre-eminence, for on it may be found marked the location and grade of every school and college in the State figured by dots, which are as the stars of the heaven for multitude. From the kindergarten to the university the whole scheme of education is represented here. There are specimens of the simplest kind of manual training, and examples of the highest forms of intellectual exercise. The school work is classified grade by grade, and shows in successive groups the nature, appliances and results of the system by which the State preserves its citizenship from the blight of illiteracy. The growth and development of the school system of the State for the last twenty-five years may be studied in statistical charts, and, from a complete collection of text books to the phonographic reproduction of musical work, no detail has been omitted by which the world may judge of the value of New York's contribution to the education of the people of the United States. The business colleges of the State make a good showing, and there is a fine collective exhibit of the New York city art schools, the Art Students' League, and other institutions of similar scope. Conspicuous among the exhibits of schools devoted to manual and technological instruction is that of the Pratt Institute of Brooklyn, and the unique product known as the Chautauqua system of education is amply and ably

illustrated here. There is no older school system in the country than that of New York, and there is no part of its civil organization of which it is more justly proud.

The great work which New York State and its civil subdivisions do for the relief of pauperism, for the care of the insane and the education of the defective classes has been demonstrated at this exhibition as it has never been before. The whole range of activity of the charitable, correctional and reformatory institutions of the State has been shown in a way which makes the subject clearer than volumes of reports could do. It is the boast of our Christian civilization that it cares for those whom pagan civilization neglected. The private and public beneficence of New York transcends all limitations of sect or creed, and its graphic delineation here may well challenge the attention of the world.

In all the work of woman at the fair the women of New York have done their full share. They have decorated and furnished the library in the Woman's Building, they have been the largest contributors to its exhibit of works of art and its collection of articles of historical interest. The trained nurses' exhibit was made under the supervision of the New York Board of Women Managers, and the New York cooking school exhibit was organized under their auspices. They have installed one of the most interesting and instructive exhibits of the fair in a grouping of the results of the education of the women of the Afro-American race. The representatives of the women of New York at the Columbian Exposition have shown in every field of effort which has been open to them their characteristic capacity, enterprise and far-reaching sympathy with all that is best and noblest in human effort.

New York has built two houses at the fair. One is the palatial structure before us, a fitting representation of the dignity and opulence of the Empire State. The other is a humble structure at the opposite end of the park destined to show how a workingman and his family may be enabled to live with due regard to the requirements of sanitation and healthful nutriment for $500 a year. The house in which we stand has been one of the sights of the fair. It has been a matter of pride to every New Yorker visiting Jackson Park that the headquarters of his State were so beautiful, so commodious and so popular. He has found here the conveniences of a club, the educating influence of a museum, and the rest and refreshment of a summer villa. The true attitude of the people of New York toward this exposition has nowhere been more fitly represented than in the superb proportions and princely magnificence of this their State house of call. But if this be New York's idea of the regal attire which befits her as a guest at the table of nations, the other edifice — the model workingman's

home — is no less typical of her care for the welfare of the lowly and her sense that the qualities which go to make her great are those which are nourished in the homes of the toilers.

And, for all this and more than I have been able to specify in detail, New York has had her reward. Judged by the most practical standard, the foremost commercial State of the Union could afford to be represented here generously, even lavishly. Her producers and merchants could not if they would have been swayed by any narrow sectional prejudice, and it would have been foreign to all the history and alien to every great tradition of the State to have left any question about too frank and friendly rivalry with which it sought to enhance the glories of the Columbian Exposition. That has been recognized by every visitor to the fair, and by none more cordially than by this great, progressive and whole-souled western people, with whose interests our own are so closely bound. Their triumph here has been largely ours, and in their satisfaction with the grand, the world-famous result we can participate not only without jealousy, but with the calm assurance that we have done our full share toward rendering it immortal. Had the fair, as most of us hoped, been held within our own borders, there would have been no grudging, halting co operation from the West. Carried out as it has been on a scale more splendid and more comprehensive than we had ever dreamed of, it is a proud satisfaction to be able to say on behalf of New York: "We are in it as no other State is; we are of it as no other State could be; we shall come out of it with laurels which will be among the most cherished of our possessions, and the most enduring part of the legacy which the Empire State of to-day will transmit to the remotest posterity."

I cannot close without adding my contribution to the many tributes of respect that have been paid to the memory of the late Donald McNaughton, the chief executive officer of the Board of General Managers of the State exhibit. No man could have worked more assiduously, more laboriously than he did in preparing for an adequate representation of the State at the Columbian Exposition. With every detail of the process he was familiar, and no one can have felt more genuine satisfaction with the result. His whole public career was marked by absolute devotion to the interests of those whom he represented, and he brought to the discharge of his duties in connection with this fair a self-sacrificing conscientiousness which is not so common as to pass without special notice. The State is fortunate which can command the services of such men; the State is great which out of the ranks of its citizenship can at all times summon such men to assume public responsibilities. Donald McNaughton was a genuine son of New York, and his pride in his native State was of that

noble kind which made him ambitious to add to its historic luster. The career of such a man is a legacy of which the income never ceases to grow. For the example which he set and the public spirit which he diffused survive him in the lives of those who came within the sphere of his influence, and so, in ever-widening circles, the impulse derived from a good man's life helps the work of regenerating the world. Mr. McNaughton lived long enough to see the fruit of his labors here, and died amid the very triumphs which he helped to create. There will be no need to fear about the future of New York while it is served by men so capable, so disinterested, and so patriotic as Donald McNaughton.

### DIRECTOR-GENERAL DAVIS' SPEECH.

The band played "Auld Lang Syne," and then Mr. Depew introduced Director-General Davis, who spoke as follows:

I can heartily and cheerfully bear testimony to the claims you (the Governor) have presented so eloquently of New York's participation in this exposition. Much was expected from that great State, and I am glad to say its government and its citizens, as a whole, have not failed in meeting every expectation. While from the standpoint of the progressive and impatient West it may have been thought a little tardy in its preliminary action, we never lost faith in its intention and were fully aware of its capacity.

To you, sir, as the chief executive of the State, we are under many obligations for your personal and official interest, always heartily manifested when opportunity or occasion required it. You, sir, and the citizens of New York can take a pardonable pride on this day in inspecting the grand exhibits which so well present the wonderful resources of the Empire State which have been installed upon these grounds. New York has been given in all of the departments prominent and positive position, and all the space assigned has been well and creditably occupied and maintained to the great benefit of the exposition and to the glory and renown of your State.

New York is not only fully represented here in all of the exhibit departments, but she is and has been honorably and abundantly represented in the management and building of this exposition. It cannot be forgotten that Richard M. Hunt, the architect of the Administration Building, was the chairman of our board of architects; that George B. Post was the architect of the Manufactures and Liberal Arts Building, and that McKim, Mead & White were the architects of the Agricultural Building. You cannot look about these grounds without seeing the evidences of the handiwork

SECTION OF GRAND STAIRCASE

and artistic touch of St. Gaudens and Frank Millet, or view the exhibit of floriculture without being reminded that John Thorpe is with us.

The deliberations of the Board of Lady Managers, in the absence of the president, are presided over with queenly grace by a lady from New York. I need not remind you that a citizen of New York is in immediate command of the important Bureau of Awards; that one of her most eloquent orators delivered the oration on the occasion of the dedication of the grounds and buildings; that a citizen of that State, in the person of the Vice-President of the United States, accepted on behalf of the people of the United States the grounds and buildings for the purpose of an international exposition, and that still another citizen of New York, in the person of the President of the United States, set the wheels of the exposition in motion on opening day.

New York has done splendidly, and to emphasize how fully we appreciate her great interest and her great work we have come here this morning, accompanied by our chief officers, representing every part of the great organization which has carried on this work under the direction of the National Commission and the board of directors, to extend to the imperial Commonwealth of New York, in the person of her chief executive, a royal welcome to this imperial exposition of which New York is so important a part.

### THE STATE DAY POEM.

Mr. Depew then introduced the poet of the day, Mr. Joseph O'Connor of the Rochester "Post-Express," who read the following poem;

It happens oftener than we deem
That we should do the good unsought, unknown,
Of which we did not dream;
That from the good we aimed at we should swerve,
And in our dear delusion so subserve
God's purposes, as we defeat our own.

The Genoese who sailed
A westward course, in the wild hope to find
The distant Indies, failed;
But in the quest for the rich orient
He touched the fringes of a continent
And gained a nobler blessing for his kind;
Though dying unaware
Of the full fruitage of his enterprise
And all its glory rare,
And half believing Orinoco's tide,

Far shining through the tropic forests wide.
The stream around the Earthly Paradise.

The Englishman who sought
A land-locked passage unto far Cathay
In vain, not vainly wrought;
Since the great city of the younger world
Has risen where the weary sails were furled,
And Hudson sings his name in crooning spray.

The earnest multitudes
That hither came from many a distant strand
And braved the solitudes,
After the hope of brilliant conquest failed,
And the fierce fever of adventure paled,
Thought little of the future of the land.
These simply yearned for peace;
These for the right to conscience and to creed,
And hate's surcease;
And all rejoiced to hold some share of soil,
Content to spend themselves in honest toil,
And wait the garnered harvest from the planted seed.
With nature face to face,
From old condition and convention free,
They grew in power and grace;
Alert, elate, resourceful, confident,
By wood and stream unawed they came and went,
And drew the breath of ancient liberty.
They had for heritage
Old Europe's maxims and experience
Of soldier, slave, and sage;
But earth was round them in her virgin youth,
From her they caught at primal right and truth,
And touched the meanings of Omnipotence.

They never sought in sooth,
The Eden visioned in Columbus' mind,
Nor Leon's fount of youth,
Nor cared if Raleigh's golden city gleam
Afar in maze of misty hill and stream,
Nor wished to voyage after Hudson's Ind.
They toiled; and blest the spade;

They fought and did not scorn to praise the sword;
They kept the laws they made;
They hated privilege and laughed at birth
That brought no heritage of grace and worth;
They suffered and submitted to the Lord.

And when occasion rose,
Each frankly pledged his honor, fortune, life,
Against oppressive foes;
And fusing into loving brotherhood
In flame of sacrifice and smoke of blood
There came a nation from the happy strife —
In all things brave and new,
With realms of mountain, lake and sky-bound plain.
And to this teaching true —
Man's dignity, equality of men,
A sovereignty in every citizen.
The people's good the guaranty to reign.

Oh, sailors, bold and brave,
Of olden time, that took the wandering spray
And climbed the unknown wave,
Although we give to each due meed of fame
And wreath with laurel every sea-sweet name,
Ye did not find nor make America!
The hope, the love, the thought
Of millions joined to nourish as it grew;
The toil of ages wrought
Through nature's ample dower of mine and field,
And many a soldier fell across his shield
Ere we could pause to find your sea dreams true —
Lo, many a costly bale
Beyond the scope of Asian caravan;
A fountain in the vale
Whose mists resolve the time-worn race's ills;
A golden city in the distant hills;
Almost an Eden for regenerate man!

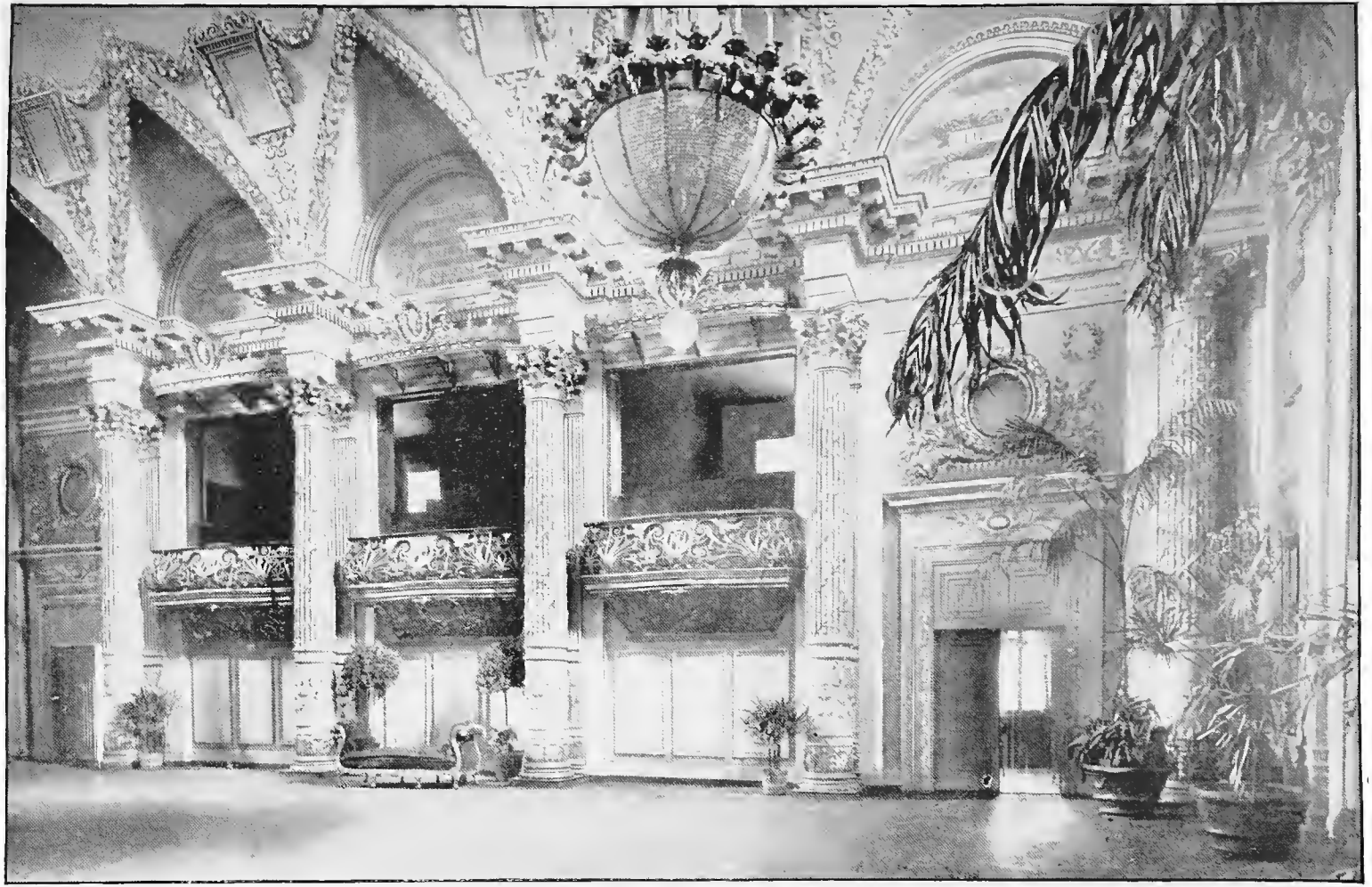
No wonder we rejoice!
Yet breaking through the jubilee of praise
There comes a warning voice,
The tale of those that won, but could not hold,

Of those that rose with steel and fell with gold,
The great republics of the ancient days.

A touch of selfish greed,
The taint of luxury in social health,
The hates of class or creed.
The lure in politics to civic guilt
Might sap the stately home the fathers built
And take the household spirit as by stealth;
And in some coming time
A generation might arouse in fear
And sense of loss and crime,
To find the new world faith and feeling dead
The old world's standards ruling in their stead,
And nothing but another Europe here!

Due honor to the lands
From which we sprung; all hail the ancient fame
Of kindred hearts and hands!
But we began with all that they had won,
A counsel of perfection calls us on;
To do no more than they have done were shame.

'Twere better far, I hold,
To see the Iroquois supreme once more
Among the forests old,
From hill-girt Hudson's current broad and slow
To where 'twixt Erie and Ontario
Leaps green Niagara with a giant's roar;
To see the paths pursued
By commerce with her flying charioteers
Tangled with solitude,
The Indian trail uncoil among the trees,
The council runner's torch against the breeze
Its signal fling — "the smoke that disappears;"
To have the wigwam rise
By summer-haunted Horicon so fair;
Fruit blooms and grain-gold dies
Fade from the shadows in Cayuga's tide,
The vineyards fall on Keuka's sun beat side,
The mill-crowned cliffs of Genesee made bare.
'Twere better far desire
To see Manhattan's self laid desolate,



BANQUET HALL, South Side Showing Balconies

Drear as another Tyre,
Her palaces in ruins overset,
Her shores begirt with weed and drying net,
And not a lettered stone to tell her fate;
Yea, and her rival here,
Arising like the domes of Kubla Khan
In poet's vision clear,
Dissolved as swift again along the strand
To grassy swamps and dunes of sifted sand,
Spurned by the scornful spray of Michigan.

Such things must come again,
Wherever in their hope and virtue rise
A race of wise, free men;
But what were grain field, railway, granite street,
Or golden ornament, or gallant fleet,
If he who made, whose service glorifies,
Should suffer, shrink, and dwarf
In plain, or mart, or by his factory wheels,
Or on the crowded wharf?
Since not the mountain, in his cloudy stole,
Nor the great sea, outranks the conscious soul
That knows their glory and their beauty feels.

But out on dreams of dread!
In him I put my waking faith and trust,
A king in heart and head,
Who masters forces, shapes material things,
Who loves his kind, whose common sense has wings,
The true American, the kindly just,
Full prompt in word and deed,
And ready, to make good some human hope,
In time of utter need,
To cross at Delaware the ice's gorge,
Or tread blood-boltered snow at Valley Forge,
Or keep at Gettysburg the gun-shook slope!

And greater faith I ask
For that mysterious power that watches o'er
The workman at his task;
That shapes his effort to the higher aim
And will not let his straying fingers frame
A graven thing — to worship and adore.

After the reading of the poem the meeting was turned into a reception, at which several thousand visiting New Yorkers and others were introduced to Governor Flower and the State officers who accompanied him.

In the evening a joint reception was given Governor Altgeld of Illinois, and Governor Flower of New York, in the State building. Governor Altgeld extended, on behalf of the State of Illinois, a cordial greeting to New York's executive and other State officers, and spoke in a highly complimentary way of the place New York had taken in the exposition, and which her sons held throughout the West. Governor Flower responded in a happy vein, and the evening was a delightful reunion of the citizens and friends of both States.

The festal nature of New York's celebration was not confined to a single day, but ran through the greater part of the week. The chief event subsequent to the anniversary day, however, was the reception and ball given by the "Sons of New York" to Governor Flower and staff, State officials, and other executive officers. The "Sons of New York" is a society of Chicago, founded in 1890. The object and the full significance of the gathering is well set forth in a souvenir prepared for the occasion by Mr. J. Ensign Fuller, a member of the society:

History does not record the commemoration of an occasion in any manner similar to this commingling of residents of two great States, but natives of only the one; under the roof and in the magnificent apartments of a building erected by the generous munificence of our mother State; upon spacious grounds furnished by their adopted city, largely through the influence of the members of the society to which has come the honor of tendering this reception, and to crown all, within the inclosure of an exposition solemnizing the discovery of the great continent which has nurtured us, and participated in by every civilized nation upon the face of the earth.

Upon these grounds, within these parental walls, in the beneficent shadow of the escutcheon of our great Empire State, and surrounded by its archives and memories, the Sons of New York bid you all a hearty welcome to the great city of their adoption and to their hearts and homes.

Less than four years ago this society was formed by a few energetic sons of New York, partly to assist in accomplishing the grand result of a world's fair, and to show to the world the peculiar advantages of their wonderful city for its location, but principally, as shown by its charter, "To keep fresh in the memory of every son and daughter of New York, resident in Illinois, the glory and honor of the Empire State, and by

meetings, readings, lectures and other ways promote social, intellectual and friendly relations among the members and their families." How well the sentiment is appreciated and nurtured can best be understood from the record, which shows a membership living of nearly 700, and a page "in memoriam" of worthy men who have upheld the honor and aided in expanding the mutual and friendly relations of all citizens of their grand old native State.

We thank the chief executive of that great State and his trusted aids and her ever-kindly board of managers for this opportunity of mingling with all these denizens "fresh from her granite hills and sparkling streams," who bring to us the fragrance of her sun-kissed mountains, and the odor of her salt-sea shores. In extenuation of the principles upon which our society is founded, we cordially open wide its doors, and reaching out the honest hand of fellowship, invite you all within the pale of its domain, whether natives or sons or daughters of a native, all are welcome so long as by their thought and work they glorify the record of the dear old mother State, and raise aloft the standard of Excelsior.

The reception was one of the most brilliant of the season. Admission was by invitation only, and the spacious rooms were filled with stately men and beautiful women bound by the common tie of an ancestry native to the Empire State. Before the dancing began, the president of the society, Hon. De Witt C. Cregier, ex-mayor of Chicago, spoke as follows:

The sons and daughters of New York are proud of their native State and no less proud of the great State and city of their adoption — Illinois and Chicago. We recognize New York as the Empire State of the republic. At the same time we do not lose sight of the fact that Illinois is the Empire State of the great west. Within their respective domains are located the two great metropolitan cities of the American continent — New York and Chicago — the former ripe with age and mighty in her achievements, the latter, although comparatively but an infant in years, yet a giant in everything that pertains to an enlightened and progressive civilization.

As American citizens we are proud of the majesty and grandeur of our common country, of which the States of New York and Illinois, with their grand progressive cities, New York and Chicago, are prominent and important factors. Let us then cultivate the splendid fellowship that inspired the grand old sages and patriots during the formative period of our free government. Let not the breath of idle report, however fragrant, obtrude where only comity and fraternity should exist between States and

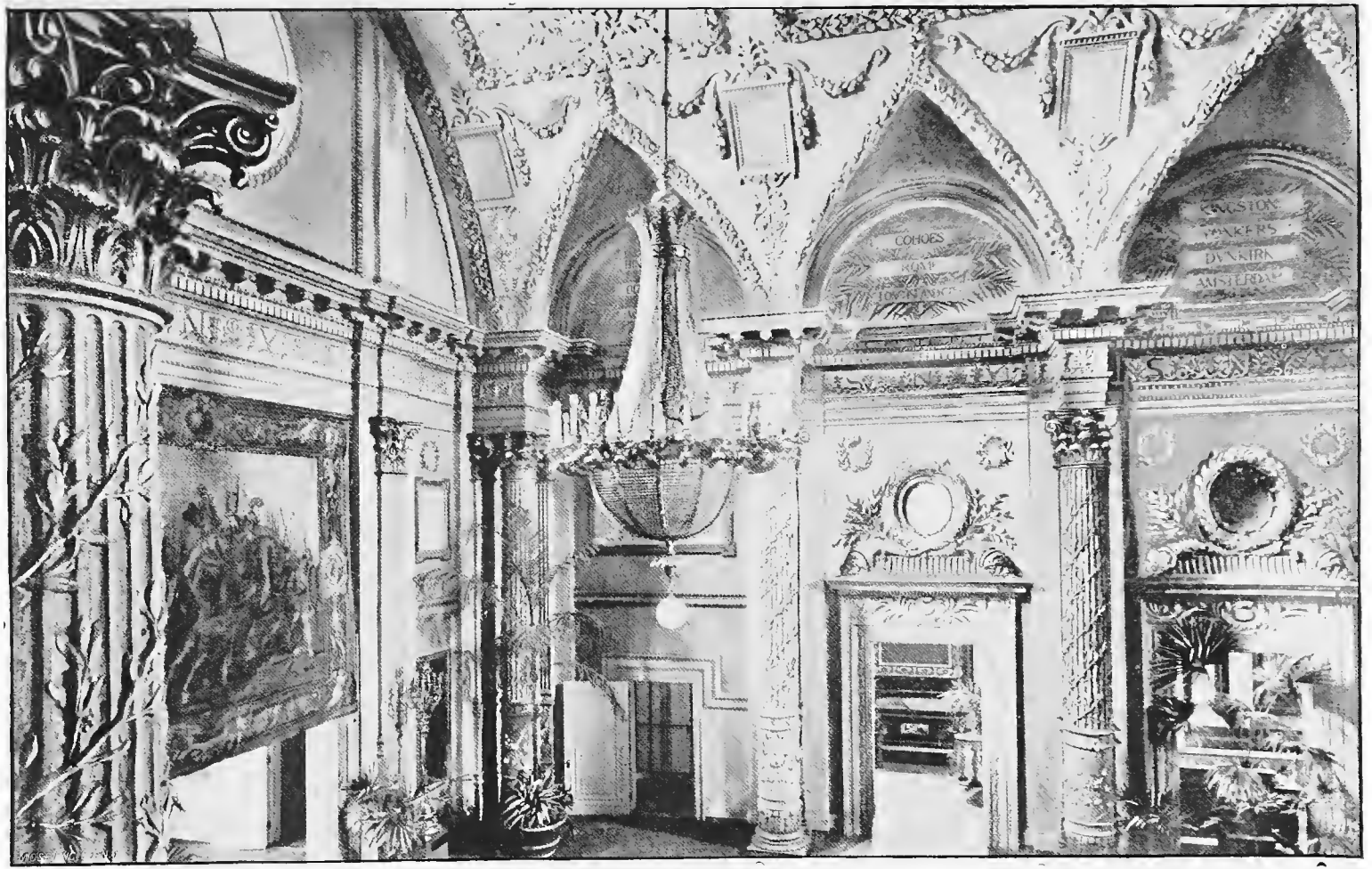
between cities. Let us indulge the hope that our country and her institutions may endure for all time and the people thereof may be imbued with the high and ennobling principles of "Excelsior," "State sovereignty and National union."

Gov. Flower responded on behalf of the State of New York:

*Ladies and Gentlemen:*

In my remarks in this building yesterday I did not allude to the most important exhibit which the State of New York has in this great White City. I purposely withheld mention of it for this occasion. This exhibit is not formally a part of the exposition; it is not installed in any particular place; it does not come before any jury of awards — but the visitor encounters it all over these grounds. It is visible in the architecture of the best of these beautiful buildings and in the wonderful landscape setting which has helped so much to reveal their beauty. It was prominent in the energy and business ability which made the success of the exposition assured. It is found in the administration of all the great departments of the fair. It is represented here to-night in this hospitable home in numbers and in enthusiasm, and I ask you is there any finer exhibit than the spirit and presence of the sons of New York?

I did not expect you would answer yes. Everywhere the sons and daughters of the Empire State are leaders. Everywhere in this broad land they reflect credit and praise upon the home of their nativity. The energy, ability and progressiveness which have made their native State the first in wealth and intelligence and population and material resources have made her sons foremost in building up the civilization and prosperity of every section of the country. This marvelous western metropolis which most of you have made your adopted home is New York's grandchild. New York made possible Chicago's great growth when she opened through her territory the Erie canal, and thereby connected the seaboard with the prairie and provided all-water transportation for the products of the West. The importance of that bold and stupendous achievement in the development of the West cannot be over estimated. In the States around the shores of the Great Lakes are congregated now fully half the people of the nation. The same waters flow past the borders of eight powerful States, linking them all in one commercial fraternity, with common interests and ambitions. Into this rich and resourceful region — now the busiest and most productive of any similar geographical extent in the land — New York sent out her sons in great numbers. They have plunged into its industries and business. They have helped build its great cities and create its enormous wealth. They have aided in the establishment of its




BANQUET HALL, Detail of Northwest Corner

schools and churches and in all that has conserved to advance its ideals of civilization. You who are here to-day — the sons of New York in Chicago — know better than I can tell you what hardships were gone through, what obstacles were overcome, but we of the East do know what victories you have won and what undreamed-of success your efforts have attained. And when we reflect in how large a part are these victories and this success due to the sons of the Empire State, we are more than ever convinced that the motto of our forefathers which is emblazoned on our escutcheon is no empty language but the constant aim and hope of a splendid race wherever they are found — Excelsior!

I need not say we are particularly glad to meet our Chicago relatives to-night. We feel it is largely owing to your efforts not only that the Columbian Exposition is so great a success but that New York has been able to occupy so prominent a part in it. I am sure I voice the sentiment of the New York managers as well as that of the State officers and the citizens for whom I speak when I give testimony to the uniform courtesy and good will which have marked the attitude of the managers of the exposition towards our State. We feel that for this kind treatment and consideration we are in no small degree indebted to the sons of New York in Chicago. It was your loyalty to your native State, your pride in its resources and your love for its pre-eminence, that have smothered all jealousies, smoothed out all difficulties and enabled New York and its people to be adequately represented in this greatest of international expositions. As Governor of New York I am glad of this opportunity to thank you on behalf of the State for your splendid services and to meet here personally those who have proved themselves true and noble sons of the Empire State.

The reception committee of the Sons of New York numbered 100 prominent Chicago business men, among whom were such well-known names as De Witt C. Cregier, Lyman J. Gage, C. L. Hammond, John P. Hopkins, James H. McVickar, Walter C. Newberry, Potter Palmer, John T. Shayne, and many others closely identified with the city's growth and prosperity. Many prominent State and government officials were present as guests of the society, and the reception was marked by a spirit of good-fellowship and *cameradarie* rarely found in a public reception where the majority of those attending met for the first time.

The remaining chief events of the week were the ball given Wednesday evening, September sixth, by Mrs. Ralph Trautman of New York, and Mrs. Francis B. Clark of St. Paul, to the Army and Navy officers;

the banquet given on the seventh to the railroad officers of the northwest by the foreign commissioners at the fair in return for the courtesies extended in their tour to the Dakota wheat fields; and the Japanese tea given by the New York board September eighth, to 800 invited guests, followed by an exhibition by the Royal Japanese dancers of the typical folk and religious dances of the Orient.

The Army and Navy ball was given as a special compliment to the United States officers on duty at the fair, and was a particularly brilliant success. The grand march was led by Governor Flower of New York, and Mrs. Potter Palmer; Governor Pattison of Pennsylvania and Mrs. Trautman; Governor Peck of Wisconsin and Mrs. Clarke; Governor Waite of Colorado and Miss Minor. The chief foreign commissioners and attachés were also present, and the handsome costumes and glittering uniforms presented a brilliant scene in the gorgeously decorated hall.

During the whole of New York's gala week the weather and all exterior circumstances were most favorable, and the period was marked in the history of the exposition for its series of brilliant social events.

## MANHATTAN DAY.

During the New York celebration it was several times remarked that New York city should have a day for her special glorification, for the double purpose of affording as many of her citizens as possible an unequaled opportunity for making the journey, and of offering to Chicago in person her sincere congratulations on the success of the exposition. The idea found a warm advocate in Thomas F. Gilroy, mayor of New York city, and he immediately set on foot the necessary preliminaries. The press of New York heartily supported the project, and the leading citizens were favorable to it.

On September 27, 1893, Mayor Gilroy appointed a citizens' committee, numbering 225 persons, the majority of whom accepted. October twenty-first was fixed upon as the best date for "Manhattan day," as it was termed by common consent, and the choice was approved by the exposition authorities. The railroads offered the low rate of fifteen dollars for the round trip, and complete arrangements were made by the managing committee for a successful excursion. An effort was made to secure the attendance of the Seventh Regiment, but as nearly all its members had been on their vacation and a majority of them had already visited the fair, it was deemed inadvisable by their

officers. The famous Old Guard of New York decided to attend and were a distinctive feature of the parade.

The day dawned gloomy and sullen, but towards noon the sun broke through, and the skies cleared brightly for the ceremonies. In the early part of the season the attendance would have been considered enormous, but coming so soon after Chicago day, with its unprecedented crowd of 750,000 people, the 300,000 present was somewhat disappointing to the exposition authorities who had confidently expected, and widely advertised that the half-million mark would be reached. The failure was probably due to this very cause, barring a few thousands who may have been kept at home by the gloomy morning. No one who had experienced Chicago day, its mass of densely packed humanity, the utter futility of sight-seeing and the tedious waits for transportation could be expected to deliberately subject themselves to the possibility of another such occasion. Consequently Chicago people wisely staid at home, the visitors within her gates came. Still, with the exception of Chicago day and the three days immediately following during which the influx of visitors for Chicago day remained, Manhattan day was signalized by the largest attendance of the season. It is impossible to estimate the number of New Yorkers present. Seventy-five thousand badges were distributed from the State building to New York citizens or those affiliated with the State, and a conservative estimate placed the number in attendance from New York city at 25,000; a very large number certainly for a city one thousand miles away, and indicative of the interest taken in the fair.

The programme for the day passed off smoothly and was full of interest. The various civic and military organizations entered the grounds during the forenoon, and at one o'clock the literary exercises at Festival Hall were begun. At their close the "Manhattan day" parade was formed in the south end of the grounds. It was led by the Elgin Band and the Chicago Hussars, under command of Captain E. L. Brand. Following came the First Illinois Regiment National Guard, with band; the Old Guard Band; the Old Guard; carriages containing civic dignitaries; and the Sons of New York, 600 strong, under command of Captain Miles. The procession moved to the north end of the grounds and was reviewed at the New York State Building by Mayors Harrison and Gilroy and Major-General Nelson A. Miles U. S. A. In the evening a brilliant display of fireworks took place on the lake front.

The literary programme in Festival Hall was one of the best of the exposition. The full programme is as follows:

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| Music, Overture to "William Tell"..... | Thirteenth Regt. (N. Y.) Band. |
| Prayer..... | The Rev. John W. Brown. |
| Address of Welcome..... | Mayor Harrison. |
| Address in Response ..... | Mayor Gilroy. |
| Address..... | Gen. Horace Porter. |
| "Star Spangled Banner"..... | Columbian Chorus. |
| Poem, "New York to Chicago"..... | Joseph I. C. Clarke, recited by Agnes Booth. |
| Address..... | Hon. Chauncey M. Depew. |
| "Keller's American Hymn"..... ..... | Columbian Chorus. |
| Address..... | Hon. John R. Fellows. |
| "Battle Hymn of the Republic"..... | Columbian Chorus. |
| Address..... | Dr. Seth Low. |
| "My Country, 'Tis of Thee"..... | Columbian Chorus. |
| Benediction ..... | The Most Rev. M. A. Corrigan. |

Mayor Carter H. Harrison welcomed the New York guests in warmest terms. He spoke of the great success of the fair, and declared that much was due to the collective and individual efforts of the New Yorkers, whose generosity was exemplified in every portion and all departments of the exposition. The home of the State of New York on the grounds had always been a scene of the most generous hospitality and was one of the most popular resorts within the exposition gates. The mayor then alluded pleasantly to the good feeling existing between the two great cities of the Western World, and closed with a warm encomium on the wealth and worth of the Empire State.

The insertion of Mayor Harrison's speech in full is unfortunately impossible as no record of it has been found, owing probably to the confusion attendant upon his assassination which occurred the following week. Carter H. Harrison was a liberal, broad-minded man and a conspicuous example of what pluck and energy will do for a man in America. He was one of the firmest friends of New York's interests at the fair and one of his last public acts was the delivery of this speech of welcome to her representatives. It was with profound regret that New York heard of his untimely death.

In responding to Mayor Harrison's welcome, Mayor Gilroy of New York spoke as follows:

DOORWAY FROM GRAND STAIRCASE

*Ladies and Gentlemen:*

It is with feelings of profound pleasure that I reciprocate the greetings of Mayor Harrison, and express the gratitude of all New Yorkers at the kind manner in which they were conveyed. It is an honor, indeed, for New Yorkers to be present upon this memorable occasion, and we have more than ordinary satisfaction in testifying to our appreciation of the energy, industry and liberality which have distinguished the people of Chicago in getting up this magnificent exposition. There can be no doubt that the result of such expositions as this will be to bring together all the peoples of all countries in closer communion.

New York has been, indeed, anxious to obtain the location of the World's Fair, but, although a New Yorker of New Yorkers, I cannot help expressing the belief that it would be difficult, if not impossible, for New York or any other city on the globe to have exceeded the magnificence of this great fair. It is not alone Chicago that is to be congratulated; it is the whole country, and, indeed, the whole civilized world, of which this great exposition is but an epitome. We take pride, as New Yorkers, in being a portion of that great country, the genius of which has made such an exhibition possible.

No one who has visited the great White City can ever forget it, and the spectacle of the Court of Honor, illuminated by electric lights, with its fountains playing, surrounded by buildings of superb architectural construction, is a dream of beauty materialized. There is one sad reflection connected with the White City. It is that within a few weeks, or months, at furthest, the magnificent specimens of architectural art, together with all that they contain of human greatness and civilization, will pass away. I cannot help but think that an outlay, however great, that would tend to preserve those magnificent buildings in monumental marble would be an expenditure for which the country would receive a hundredfold in the liberal education which our population would receive in visiting them, and in the expansion of mind and elevation of thought which they would eventually have.

The best effects of mankind from all portions of the globe; architecture in its grandest forms; the marvelous possibilities of electrical science as shown by the human voice transmitted so as to be heard far away over a wire; the beautiful and astonishing productions of manufactures and the liberal arts; machine power, which challenges the admiration of mankind; the best products of the fruits of the earth; in fact, this great exposition, with all its wealth of the products of civilization and progress, closes an era and marks an epoch. It is the transfiguration of man's industry and man's effort. It is a subject to which it would be impossible for me to

do justice. It is only fitting that I should pay this passing tribute to its greatness and its grandeur.

There are others to follow who are better fitted and more capable of doing justice to this magnificent theme. To them I will leave the pleasant task. Again, ladies and gentlemen, as the chief magistrate of the empire city of this country, I welcome you to the "White City," created by the metropolis of the West, and hope and believe that this renewed intercourse will bring these two cities more closely in a bond of union and brotherly love."

General Horace Porter spoke as follows:

As in ancient times all roads led to Rome, so at the present time all roads lead to Chicago. To-day the city of the seaboard comes to lay its tribute of admiration and respect at the feet of the city of the lakeside. Therefore, in what I shall have to say, my story will be "A Tale of Two Cities."

When "Manhattan day" was designated and consecrated as a day in which the city of New York was to offer its testimonial of appreciation to the great exposition, her citizens arose en masse to make their pilgrimage to the fair. The numbers that have come have been limited only by the limit of transportation.

My first and most agreeable duty is to express to the officers of the exposition and to the people of Chicago in the name of the people of New York their profound acknowledgments and their deep sense of gratitude for the cordial and unbounded welcome which has been extended to them. Your people have vied with one another in pressing the cup of greeting to our lips ere we could remove the stains of travel from our garments. We have come to unite with you in the celebration of four centuries of history. We stand here to-day entranced with the grandeur of achievements, inspired by the majesty of events. We find ourselves within the border of a State which did not exist at the time of the inauguration of our national government, but which now contains a single city with a population nearly half as great as that of all the thirteen original States. We are enchanted by the sight of this phantom city, phantom-like in color, phantom-like in the suddenness with which it has appeared before the eyes of men. We find its buildings palaces, its grounds gardens, its lakes, lagoons and islands a picture of fairyland, looking as if it had been summoned into being by the magic wand of an enchantress. We are almost awe-stricken as we stand within the shadows of these majestic temples of art. Every branch of every science and of every art seems to have been laid under contribution in the achievement of these marvelous results.

You have taught us that art is more God-like than science, for while science discovers, art creates. If an emperor could stoop to pick up the brush dropped by a Titian, if Meissonier could kiss the slipper once worn by a Michael Angelo, all men may bow to art. The art works upon which we gaze to-day speak a universal language and impart a lasting pleasure to all. They appeal to our highest senses and awake our noblest emotions. They are an eternal benediction. They induce the power of reflection and inspire us with the majesty of the creative faculty. They cause us to realize more fully than ever before Lytton's definition of art: "The effort of man to express the ideas suggested to him by nature of a power above nature, whether that power lie within the recesses of his own being in that great first power of which nature, like himself, is but an effect."

A visit to the fair is the equivalent to a trip around the entire circuit of the world. Here we meet the peoples of the nations; we hear their language and their music; we see their faces and familiarize ourselves with their manners and customs. Here we are carried back 400 years in history. We see upon land the reproduced monastery of La Rabida, upon the water the historic caravels, those brave little craft, frail in structure and diminutive in size, yet which rode the waves long enough to penetrate the mystery of the seas, to reconstruct the map of the world and shed upon the gloom of the dark ages the light of a modern civilization; those vessels which brought to our shores the illustrious navigator who broke the shackles of superstition, calmed the fears of timid men and gave a new world to commerce, to science and to civilization. From the progress made in the past who can tell how far the giant republic will 400 years hence dominate the policy of the world? This nation was not born among the fabled tales and mysteries of barbaric ages, but planted, fully equipped, upon this virgin continent. It has been woven of the stoutest fibres of other lands and nurtured by a commingling of the best blood of other nations. America has now thrown off the swaddling clothes of infancy and stands clothed in the robes of majesty and power in which the God who made her intends that she shall henceforth tread the earth. To day she may be seen moving at the head of the procession of the world's events, leading the van of civilized and Christianized liberty, her manifest and avowed destiny to light the path of liberty throughout the world till human freedom and human rights become the common heritage of mankind. In the working out of this destiny we feel assured of the events of this memorial day that Chicago and New York will always be found laboring in common for the nation's common good, and in all things pertaining to our national prosperity, moving forward

with one purpose, standing shoulder to shoulder and locking their shields together like the men in the Roman phalanx of old.

We of New York are proud to find ourselves to-day within the confines of this city of the northwest, a city in which busy thoughts and vivid images crowd the mind, in which "no man shapes himself betimes to idleness;" a city which is not a sepulchre of buried ages, but the birthplace of modern ideas; a city which is not lightened by the smiles of dying emperors, but by the gleam of the future glorious. Our two cities were contestants for the exposition. Chicago fairly won the prize. To-day the people of New York come to greet you, not only through their representatives, but they come themselves with hearts untouched by jealousy, with souls unmoved by rivalry, they cry out to you with the acclaim: "God bless Chicago; God speed the fair."

MANHATTAN DAY POEM: By JOSEPH I. CLARKE.

*Recited by Agnes Booth.*

I.

Queen of the West, whose arms outspread
Give welcome to the world,
Where lifts in sunshine thine imperial head,
Joy in thy glance and vigor in thy tread,
For thee our flag's unfurled,
Chicago!

Hail! 'mid thy lofty piles that rise —
Dreams of divinest art,
Dreams ages dared not realize
Until the flash of thy brave eyes
Bade them to life to start.

In majesty whose sight enthralls,
In beauty born of light,
Swift rose thy spacious palace halls,
Pillars and domes and sculptured walls,
A miracle in white.

Lo, as thy giant labors ceased,
The nations entered in
With world-culled wonders to thy feast.
Now come we from the sunrise East,
To hail thee next of kin,
Chicago!

ADMINISTRATION BUILDING

II.

From far we've watched thee gather strength and power,
With genii growth made mighty hour by hour.
We saw thee flame-swept and from ashes rise
While yet thy smoke pall hovered in the skies.
Indomitable, born to conquer Fate
And tread thy bold path eager and elate,
The cornland pouring treasure at thy feet
And all the wheatland heaping thee with wheat,
Thine iron highways silvering the meads,
The rolling thunder of thine iron steeds;
The far snow mountains sending thee their gold,
Thy waters rich with cargoes manifold;
Thy pulses quickened with the wind that sweeps
O'er flow'ring prairies and foam blossomed deeps,
The young blood making crimson on thy cheek!
Welcome from thee may well the mighty seek!
Welcome to-day Manhattan claims from thee,
By sister-longing as of lake for sea!

III.

We lay at thy feet, oh, sister sweet,
A wreath of laurel green.
Oh, sister strong, it is brought with song
And joy to our Prairie Queen.

In our joy there rings the note that brings
The ocean surf to shore;
In our song there swells the joy that tells
Of ships the wind before.

Thy corn-plume waves where redskin braves
Shook dancing plumes abreeze;
Our trumpet hails where the foreign sails
Once lorded shores and seas.

From the salt, green verge of our ocean surge
We sweep in a torrent blithe
Through corn-seas deep to plant and keep
The trident by the scythe.

From the wind-swept home of wave and foam,
Where sea-won empire stands,

We come on a tide of love and pride
To kiss thy foam-white hands.

The sheen of thy lakes in silver breaks
Thy girdle of cornland gold,
And their waters swoon in the cool lagoon
Thy glory to behold.

Now slow, now fleet, thy waters sweet
Thou sendest down to sea.
Our love flies back by a straighter track,
And sweet as thy waters be.

Oh, sister white, in the autumn light
The East salutes the West,
And may ever so, transfigured, glow,
The sisters, breast to breast.

IV.

Nor alone do we stand in thy temple ground,
For sisters and sisters are gathering round
From the garlanded maid by the Golden Gate
To the Creole Queen do we joyously wait —
A throng of the cities encircling thy throne,
With the horns of our gladness stormily blown,
And chords from our harps thrilling clear between,
In the praise of our glad-hearted Prairie Queen;
But louder than rise the brave harmonies free,
There springs from our lips like the voice of the sea
When smiting of wind rolls in thunder its waters,
The song to our mother, the song of her daughters —
Song such as never was sung to another,
The chant of our glory, the praise of our mother,
Mother America!

V.

Mightiest type of the human,
Giant-limbed mother of men,
Broad-breasted mother of woman;
Whose millions are sixty and ten:

Mother majestic and splendid,
Mother of glories and joys,

By wisdom and power attended,
Jubilant mother of boys:

Mother most tender and holy,
Whose tears are as lovely as pearls;
Guardian of gentle and lowly,
Delicate mother of girls:

Mother of mountain and river,
Who looketh from foam to foam —
Mother, the bountiful giver,
Beautiful mother of home:

Mother of sower and reaper,
Of crops and of fruitful soil,
Of manhood the builder and keeper,
Mother of glorified toil:

Mother of fruit and of flower,
Of the flocks' and herds' increase;
Mother of sunbeam and shower,
Plentiful mother of peace:

Mother of science, far-reaching,
Of music that swells from thy heart,
Of beauty beyond the old teaching,
Mother of purified art:

Mother, whose bosom shall mingle
The red of all blood that flows,
Till lastly it runneth as single
And pure as the streams from snows:

Mother, the roseate ever,
Robed in the sunset's bars,
Mother of lofty endeavor,
Crowned with the diamond stars:

Mother, our love thy defender,
Mother, thy love our might,
Mother, thy glory our splendor,
Mother of freedom and light:
Mother America!

VI.

Hark to the march of the millions whose murmurous work songs arise at the dawn,
Humming and throbbing and clanking their looms and their engines till day has withdrawn,
Chaining the forces of earth and of air as their slaves for the saving of toil,
Seeking new secrets and heaping up trophies of science in spoil upon spoil.
What can withstand them, what can o'ermatch them in prowess and riches and pride?
Wonder not, then, that new millions are pouring upon us on tide after tide —
Pale-fronted millions grown bitter from holding the stirrups and bridles of kings,
Praying but light and a spade in the open — for manhood that labors and sings.
Oh, for these newly-come brothers and sisters, yea, for ourselves, let us ask,
Have we not grander and brighter a guerdon to offer than song with a task?
What to grow richer in gold till our eagles outnumber our tassels of corn,
If in the land of the eagle our souls cannot soar on the wings of the morn?
What to grow mightier, huger and greater, many as sands of the sea,
If we grow not even better and purer, happier, gladder, more free?
Free with a freedom of sunshine and breezes, glad as the waters that leap,
Happy as love on the lips of a maiden, and pure as an infant asleep.

Glory abounding,
Joy resounding,
Between the oceans, 'neath the dome above;
Land of the strong,
To thee belong
Forever and forever light and love.

The next orator was Hon. Chauncey M. Depew, who spoke as follows:

One of the most interesting as well as important incidents of the mammoth and marvelous exhibition has been the celebrations, National, State and civic. While the governments of Europe are imposing additional burdens upon already over-burdened people to increase their great military and naval forces, while the world outside of the United States is either an armed camp or engaged in active hostilities, these emulous and friendly meetings of conflicting races within these walls demonstrate the possibilities and illustrate the hopes of the world for civilization and peace. Great Britain and Russia, Germany and France, Italy and Austria may,

McMONNIES' FOUNTAIN "COLUMBIA"

through their governors and their armies and navies, be prepared for wars of extermination across the Atlantic, but on this side and within the gates of the White City each of them rejoices in the triumphs of the other and applauds its efforts in the celebration of any excellence or advance in the industrial arts.

The influence of this commingling of races upon the lofty plane of human achievement and progress, of the commingling of clashing creeds in the congress of religions carried by representatives here present to all parts of the habitable globe, must result in nobler aspirations and greater efforts for the friendship of nations and the harmony of the world.

Our interests as a republic have been especially concentrated in the celebrations of the several States of the Union. When Illinois or Pennsylvania, Ohio or Wisconsin, Kansas or Missouri, California or Oregon, Georgia or South Carolina, or any of the newer sisters of the West have done their best, the exhibit of their excellence and development has sent thrills of honest pride and joy through the Empire State of New York. It has been a pride and joy shared by all the States when each one has demonstrated its claims for distinction and exhibited its growth. The lesson has been enforced over and over again until it has become the morning and evening salutation in every household in this broad land, that we are one people, the citizens of one great republic and that whatever there is in any department of civilization or liberty, which constitutes the peculiar merit of any State, is the common property of all the Commonwealths of the American Union.

In this glorious festival and generous rivalry it was eminently fit that Chicago should take the lead. The 700,000 of her sons and daughters who passed through the gates of the White City on "Chicago day" were the living witnesses of the indomitable courage, the unfailing enthusiasm, the comprehensive wisdom and the brilliant genius which conceived and executed upon such superb lines by a world's exposition the celebration of the 400th year of the discovery of America No such crowd ever before was gathered upon a civic occasion within the walls of the temporary abiding place of a fair dedicated to industry and art. Properly concentrated and distributed, they would form a constituency sufficiently large to be represented in the United States Senate by enough Senators to block the wheels of legislation and stop the movement of government for the next century.

We entered into the contest with Chicago, seeking to have the World's Fair located in New York. I speak within bounds when I say there is to-day no one in New York who is not glad that Chicago succeeded in that struggle. I speak authoritatively for the 3,000,000 of

people who constitute the metropolis in conveying to Chicago their cordial congratulations upon her unequaled success in this great undertaking. The world needed a demonstration of what the American people in a new country, under new conditions and without traditions, could accomplish, and they have had it.

There is no rivalry, and can be none between New York and Chicago. New York is misunderstood because she has got so big that she has passed beyond the possibility of exhibiting her interests or enthusiasm. Things happen in New York every day and pass unnoticed which take rank with cyclones and earthquakes in other places. At the time when the press of this country and abroad was filled with the prodigious growth of the towns of the West and Northwest, there was a development going on in real estate west of Central Park which, in increase of population, in the cost of construction of buildings and enhancement of value of land was greater than in any three or four of the booming towns of the country.

The period of rivalry of cities in the United States has passed; the period of competition of municipalities for competitive trade has gone by. The prodigious development of the internal commerce of the country and the equally remarkable increase of transportation facilities to meet it have thrown upon the great cities of the United States opportunities and responsibilities greater than they can manage. It was possible twenty-five years ago for any great city by increasing by liberal appropriations its rail and water communications to side-track a rival. But that day has gone by.

The United States, stretching as it does from ocean to ocean, requires two commercial capitals, one for the coast and the other for the interior. The capital on the coast, which must necessarily be the capital of the continent, has been fixed for half a century. The capital of the interior has been located by this fair. Chicago is to be the center, gathering the products of the fields and of the mines, and New York the reservoir for their distribution through the country and abroad.

New York can afford to exercise the quality for which she is distinguished of recognizing and applauding the merits of Boston and Philadelphia, of Chicago and St. Louis, of New Orleans and San Francisco. She is proud of Duluth and Kansas City, of Portland, Oregon, and Portland, Maine. She knows that by the attractions of gravitation and opportunity, which have made London and Paris, the best products of literature, of the professions, of the arts, of the dramatic and of the lyric stage, seek fame and fortune in New York. She knows that she is and every year will become more potentially the literary and financial center of the North American and South American continents. Every university, every

thriving community, every condition of remarkable enterprise anywhere in the United States is a nursery for New York. The intellectual and material development, the growth and progress of any part of the country, while creating States and cities, are also creating new sources of wealth and power for the cosmopolitan city of the New World.

All hail, Chicago! All hail, New York!

A short address by Hon. John R. Fellows of New York came next.

*Mr. Chairman:*

It was only an hour or two ago that I came upon these magnificent grounds and looked upon a sight which shall never be furnished again for mortal eyes to gaze upon. It is not until the gates of Paradise unfold to receive New York and a good share of Chicago, that we shall witness such a vision again. It surpasses all power of imagination, it infinitely transcends all power of description. He that comes into this grand court for the first time and witnesses that unequaled display which greets the eye, cannot form words in which to express his emotion.

I had a dream of the fair. I had read of it, but I felt how truly insignificant my imagination was when I stood in the presence of the incomparable reality. I am profoundly gratified and shall be to the end of my days, that it was given me to bring my children here to look upon this scene, so that they may carry it as a pleasant memory throughout life. I am grateful that the privilege was given me from my place in Congress to vote and speak in behalf of the appropriation which indicated, to some extent at least, Federal recognition of the grandeur of the enterprise.

The buildings will soon disappear, the limitation of the mighty pageant is almost reached, and its beauty, grandeur and life will fade away; but the lessons which have been taught will survive through all the years. This magnificent White City has received within its limits representative men and women of every clime and people upon our globe. Not only the Orient has been represented, but the distant isles of the sea, the interior of Africa, and the frozen regions of the North have sent their people here to assist in proclaiming the community of earth's interest, the great brotherhood of man. As I passed by Machinery Hall to-day and heard the hum of its throbbing wheels and looms, I began to realize what it is you have accomplished for the world. Let your vision extend beyond this White City and out into the future brought so much closer by your efforts and energy. It means to the community of the earth, the linking together in common association the peoples of the world. We are weaving the garments of a better and purer civilization, linking the past to the present.

We are realizing the high conception of the English laureate when he contemplated a parliament of men, a federation of the world.

We in New York were anxious to secure this great enterprise, and it would have been a city of poor and mean pretensions that would not have sought to hold within its municipal arms the wonderful achievements we behold here to-day, and New York is no mean city. But Chicago won it. I don't believe that there is an intelligent being within the limits of our great metropolis but that has shared in the glorious success of this fair, and in the pride which all feel in this magic, this incomparable enterprise.

We do not come here in envious mood, but to express to you citizens of Chicago our thanks for your contribution, not only to a majority, but to civilization and Christianity throughout the world.

The literary programme was concluded by the following address delivered by Seth Low, president of Columbia College:

*Fellow-citizens of Chicago and New York:*

When Governor Dongan, the second of the English Governors of the province of New York, granted a new charter to the city of New York, in 1670 or thereabouts — I give the date from memory — he spoke of the city in that instrument as already an ancient city. From this ancient and historic city, which saw the last of the British soldiery depart when the war of independence had been won; which saw this Federal government established by the inauguration of George Washington as the first President of the United States; whose gates at the portal of the continent swung inward for the needy and the oppressed of Europe, and outward into the boundless opportunities of the New World — such a city we have come to bear greetings and congratulations to this masterful and marvelous city by the great lake. No exhibition at the fair is to be compared with Chicago itself. Built and rebuilt in little more than half a century, it stands to-day as truly one of the wonders of the world as the Pyramids of Egypt.

When Aladdin's palace sprang into being in a night, one window was left unfinished. The most skillful artificers of the realm, with all the jewels of the kingdom at their command, worked for a year to complete this window. When it was done it did not compare with the rest of the palace, which a higher order of genuis had completed in a single night. Something like this, I think, must be said of the general setting and effect of every other world's fair compared with the unique beauty and poetry of the White City. It is little, I know, in the ears of the citizen of Chicago to say that Chicago has surpassed every other city which embarked in a similar undertaking; one should rather say, perhaps, that

COURT OF HON

OKING EAST

Chicago has surpassed herself. But that, fellow-citizens, is precisely what has not been done. This fair is simply Chicago's energy and daring, transferring into beauty the strength of the great republic. Oscar Wilde is reported to have said that the most beautiful constructions in this country are our bridges, suggesting the thought that the lines of the greatest strength are the lines of the greatest beauty. What can be more beautiful, for instance, than the outlines of the everlasting hills, whether one sees them in the dreamy mists of a summer morning, or sharp cut like a cameo, against the sunset sky of autumn? Can anything be more graceful than every leap of Niagara? Go into the Transportation Building and study the development of the locomotive. At first the effort was to secure power only; but power being attained, grace and beauty went with its increase hand in hand, until at last the most modern locomotive, like the most modern ocean steamer, is a thing of beauty as a prodigy as well as a prodigy of power. It is Chicago's glory that she perceived the truth, so that without yielding the impressivenes of size as an evidence of power, she has yet succeeded in showing her power best by expressing it in beauty.

There has always seemed to me to be a peculiar fitness in having this Columbian fair held in an inland city. No one who knows New York will doubt for a moment that New York would have shown herself splendidly equal to the emergency had the country's honor in this matter been intrusted to her keeping. But it means more to have the demonstration given that such a fair as this can be successfully held a thousand miles from the sea. I venture little in saying that such a thing would not have been possible in any other stage of the world's history. The sea is but the highway of the nations, and rivers have been their thoroughfares until within a period hardly longer than fifty years. It is a curious fact that while man's natural habitation is the land and not the water, it has always, until our own day, been easier for him to move long distances and to transport heavy weights by water than upon the land. The city of New York, indeed, through one of its conspicuous citizens, De Witt Clinton, by urging to completion the Erie canal, gave the first great impulse to the westward movement of population that resulted in the founding of Chicago. I pause a moment to point out how natural a gift that was from a city that had been New Amsterdam, the daughter of Holland, the land of canals. But another day was soon to dawn. When Commodore Vanderbilt acquired control of the New York Central and the Hudson River railroads, he was asked what he meant to do with them. His reply was that he meant to dry up the Erie canal and drive every vessel off the Hudson river. He did not literally mean that, of course, but in those words

there spoke the seer. He perceived long before most of his contemporaries the vast possibilities of land carriage by steam power over an artificial roadway. Thus it is that a world's fair in Chicago has a significance that it could not have upon the seaboard. It is significant not only of the New World but of a new era in human affairs. It will be true, therefore, that while a modern Columbus would have no more worlds to discover, a modern Galileo might still proclaim: "The world moves."

Fellow-citizens of Chicago, it has been the pleasure of New York to aid in every way the success of this exposition. How much the architects, the artists and the merchants of New York have contributed to its success this is not the place to say. As the exposition draws to a close, amid signs of a popular appreciation justly its due, New York has but a single word to say, we congratulate and we thank you citizens of Chicago. You have made us more proud than ever to be Americans.

### CLOSING OF THE EXPOSITION.

The fair closed quietly and without ceremony on October thirtieth. It had been the intention of the management to make a special gala day of it, but the sudden death of Mayor Harrison rendered it inappropriate. The work of removal and demolition began at once and the treasures of art, industry and science, with the busy throng of attendants, disappeared to the four quarters of the globe.

On October thirty-first the Board of General Managers held a meeting at the New York State Building in reference to the disposition of exhibits and property under its control. It was voted that all exhibits, and furniture pertaining thereto, made in the following departments under the auspices of the board, should be returned to the State Capitol at Albany, be stored in the rooms intended for the use of the State Museum and be held there subject to the order of the board. The departments so designated were: Agriculture, horticulture, mines and mining, transportation, liberal arts, forestry and anthropology. The chief executive officer, Senator Foley, was empowered to dispose of the furniture and perishable exhibits and to superintend the repacking and removal of exhibits.

The disposition of the New York State Building was a subject of some solicitude. It was hoped that this beautiful structure might be spared the fate of the other buildings and remain a permanent monument to New York's presence and interest in the fair. For this reason the Board of General Managers were willing to entertain any proposition tending to this result. The Chicago Naval Academy made a proposal for the removal and occupancy of the building, but as the major part of the heavy cost of removal would have fallen on the board the latter did not feel justified in accepting. Furthermore, the building would have lost much of its significance in a strange environment away from the scenes which had rendered it famous.

On September sixth, at the reception given by the Sons of New York in the State building, Governor Flower formally offered on behalf of the Board of General Managers to convey the structure to Mrs. Potter Palmer and Mr. Harlow N. Higinbotham, of Chicago, and Mrs. Leslie Pell-Clarke, of New York, as trustees of a museum or repository representative of women's industries in the city of Chicago and promotive thereof. Mrs. Palmer in a few words gracefully accepted the trust for herself and her co-trustees. This action was eminently satis-

factory to the people of New York, as judged by the comments of the press, and it was universally acknowledged that New York could not have closed her participation in the fair more courteously than by the presentation of her costly and richly decorated building to her sister city. On September twenty-seventh a formal transfer and deed of gift was drawn up by the Board of General Managers and forwarded to the trustees for their signatures. About a month later a joint communication was received from Mrs. Palmer and Mr. Higinbotham stating that every effort had been made to secure the consent of the South Park commissioners to the retention of the New York State Building upon the exposition grounds for the purpose of a permanent woman's building, but without success, and that as the trustees had no funds with which to remove the building from Jackson Park they were compelled with great regret to decline to accept it. Nothing could be done upon the receipt of this letter but to dispose of the building as advantageously as possible at this very late date. Advertisements were inserted in the papers, and on the 24th of November, 1893, a contract was entered into with the Chicago Wrecking Company whereby the latter agreed to remove the building within the time set by the exposition authorities, May 1, 1894, and to restore the grounds to their former condition. They also gave the Board of Managers $250. This sum with the sale of the elevator and a few minor equipments brought in $1,000 as the proceeds of the building. Great credit is due the chief executive officer for the success of this negotiation, as in most cases the removal of the State buildings was a positive expense upon the commissioners.

Advantageous sales were also made of the butter, cheese, honey, potatoes, fruits, Indian goods, furniture and fixtures belonging to the different exhibits in the State building. From these sources over $16,000 was obtained. Of this amount, however, $2,271.85 was turned in from the sale of articles by the Women's Board. For a detailed account of these sales, see financial report.

Meanwhile the work of repacking and shipping the exhibits to Albany was busily carried on, and by December first all were en route. An adequate estimate of the amount of material gathered by the board for exhibition purposes may be gained, when it is stated that it took thirty-one large freight cars to transport the exhibits to Albany. This does not include the many articles loaned for the exposition, and returned directly to their owners. As soon as the cars reached Albany they were unloaded, and the goods stored, under the direction of Capitol

SECTION OF PERISTYLE

Commissioner Perry, on the fifth floor of the Capitol, and in the eastern tower.

### CLOSING WORK OF THE BOARD.

Upon the re-occupancy by the Board of General Managers of their offices in the Capitol at Albany, early in December, three important duties lay before them for consideration and action; the adjustment and settlement of all claims against the New York commission, the final disposition of the exhibits, and the preparation of a report to the Governor and Legislature. The office force was reduced to the minimum number consistent with the performance of this work.

The settlement of outstanding claims and contracts required the most careful attention. The former had accumulated in vast numbers during the summer and fall, and the confusion and great press of business consequent upon the crowded exposition period, rendered a careful investigation of their merits impossible at that time. This investigation was now made with great care, and no pains spared to separate the valid from the invalid. As a result of the adjustments, compromises and rejections, many thousands of dollars have been saved the State. A satisfactory settlement of all claims was made, except in the case of Siebrecht & Wadley, florists of New York city, who have chosen to submit their bill to the adjudication of the Court of Claims, rather than to accept the proposition of the board, made after a careful study into the merits of the case.

### TRANSFER OF EXHIBITS TO THE STATE MUSEUM.

The final disposition of the New York State exhibits in the departments of agriculture, mines and mining, transportation, liberal arts, ethnology and forestry was a matter of much deliberation by the Board of General Managers. Many suggestions were received, but all of them led to a division of the exhibits. In the opinion of the board this was to be avoided for many reasons, chief among which were, that the intrinsic value of the exhibit would decrease many more fold than the number of divisions; that the warm interest and regard felt by the people of the State for the New York exhibit as a whole, which had gained the admiration of people from every clime, and won more awards than the exhibits of any other State and most nations, would be lost by its dispersion; and that there should be given the thousands of New Yorkers, who were unable to see it at Chicago, an opportunity to inspect it as it appeared at the great exposition. Obviously the only

place which could fulfill all conditions and meet all demands was the New York State Museum, whose well-organized machinery could rapidly assimilate and classify the exhibit and at the same time preserve its identity.

Accordingly at a meeting of the Board of General Managers of the Exhibit of the State of New York at the World's Columbian Exposition, held at the office of the president of the board in the city of New York, on Wednesday, January 17, 1894, the following preamble and resolutions were adopted:

WHEREAS, section 20 of chapter 378 of the Laws of New York, 1892, provides that the officer in charge of any State department, bureau, board, commission or other office may * * * transfer to the permanent custody of the State Library or Museum any books, papers, maps, manuscripts, specimens or other articles which * * * will in his judgment be more useful to the State in the State Library or Museum than if retained in his keeping; and

WHEREAS, section 22 of the same act provides that all scientific specimens and collections, works of art, objects of historic interest and similar property appropriate to a general museum, if owned by the State and not placed in other custody by a specific law, shall constitute the State Museum; and

WHEREAS, section 1, chapter 497, Laws of New York, 1893, declares that any property purchased or provided by the Board of General Managers of the Exhibit of the State of New York at the World's Columbian Exposition * * * for use, exhibit or display in connection with the exhibit from the State of New York at the World's Columbian Exposition and paid for from the appropriation provided by either chapter 236 of the Laws of 1892, or chapter 188, Laws of 1893, may, from time to time, as shall seem to said board best for the interests of the State, be sold and disposed of by said Board of General Managers or any person or persons authorized by said board to sell and dispose of the same;

*Resolved*, in consideration of the agreement of the Board of Regents of the University of the State of New York, to place the State exhibits returned from the World's Columbian Exposition in the State Museum in the Capitol at Albany, that on the giving by the Regents of a receipt for all the exhibits now in the custody of the Board of General Managers, they shall be transferred to the State Museum.

These resolutions were sent to the Regents of the University of the State of New York, and at a legal meeting held by them in their office

at the Capitol in Albany, February 8, 1894, the following action was taken:

*Voted*, that the Regents accept the World's Fair exhibits tendered to the State Museum, and request from the Legislature that the Commissioner of the Capitol be directed to prepare the fifth floor for the safe-keeping and proper display of these exhibits and of the scientific collections now in danger of destruction in the State street building.

*Voted*, that the secretary be instructed to convey to the Board of General Managers of the Exhibit of the State of New York at the World's Columbian Exposition the very sincere appreciation on the part of the Regents of the confidence reposed in them in the transfer to their custody of the State's exhibits at the World's fair.

This communication was accompanied by a receipt in full for the exhibits and the transfer legally accomplished. The estimated value of these exhibits of the six departments is in round numbers $100,000, and will add incalculably to the attractiveness of the museum. For the exhibits of all departments, except liberal arts, kindred or allied departments, already existed in the State Museum; it was found necessary, however, to create a new department for the educational exhibit of the liberal arts department.

The care and well-directed labor with which this exhibit was collected, and its comprehensive extent, embracing as it does, every phase of educational life within the State, renders it a magnificent foundation for a pedagogic museum, second to none in the world. It is with great regret that the Board of General Managers learn that the present Legislature in their wisdom have deemed it best to postpone making an appropriation for the establishment of the educational museum and the installation of the exhibits in the other departments until the coming year. In view of the intrinsic merit, educational value, and widespread interest in the exhibits, it would seem a wise economy to place them without further delay where they could be of value to our citizens. The board respectfully recommends to the incoming Legislature the necessity and judicious policy of taking such action.

## REPORT TO THE GOVERNOR.

As authorized in chapter 236 of the Laws of 1892, the preparation of the final report was begun shortly after the close of the exposition. On February 12, 1894, the secretary of the Board of General Managers, Mr. John Foord, of New York city, resigned his position. Upon

notification from the Governor of this fact, the board appointed Mr. Howard J. Rogers, of Albany, who had been in charge of the State educational exhibit, to write the report and prepare it for publication. At a subsequent meeting of the Board of General Managers the following resolution was passed:

*Moved*, "that the board express to Mr. Foord their appreciation of his labors with them, and their regret at the severance of relations which have been so satisfactory."

It was determined that the report should contain a concise yet comprehensive presentation of the work of the commission from the beginning to the end, that it might give not only an accurate history of New York's part in the great fair, but serve as a guide for future enterprises of a similar character. To this end there have been added to the main report detailed reports from the head of each departmental exhibit, giving the scope and plan of their display. These reports are supplemented by a complete catalogue of New York exhibits in that department including those made individually and not under the authority of the board.

The third section of the report is devoted to the publication of the awards granted New York exhibitors.

Upon the transmission of the report by the Governor to the Assembly on April 18, 1894, the latter body ordered an edition of 10,000 copies printed, under a resolution of which the following is an official copy:

STATE OF NEW YORK.

IN ASSEMBLY.

ALBANY, *April* 18, 1894.

On motion of Mr. Ainsworth,

*Resolved*, that there be printed on supersize and calender paper, for the use of the present Legislature and State officials, 10,000 copies of the Report of the Board of General Managers of the New York State Exhibit at the World's Columbian Exposition. Of this number 4,000 copies shall be for the use of the Legislature, twenty-five to each member, 2,000 copies for the Governor, 2,000 copies for State officials and reporters and 2,000 copies for the aforesaid Board of General Managers.

The expense for the same shall be paid out of money appropriated for legislative printing.

By order of the Assembly, G. W. DUNN,

*Clerk.*

MANUFACTURES AND LIBERAL ARTS BUILDING

## CONCLUSION.

The great events in political history require the perspective of time before their valuation can be justly made; in like manner the influence of this great industrial exposition cannot now be accurately estimated.

But the enterprise which has made the name of Chicago familiar even to the steppes of Asia and the jungles of Africa, cannot fail to be of inestimable benefit to that city and to the country whose national celebration she undertook. Companionship and intimacy beget confidence, and confidence begets trade, the source of national wealth. The friendships begun at international gatherings are productive not only of brisker trade and commerce, but often of international enterprises and epoch-making projects. What is true of the nations is true, in the same relative degree, of the States which compose our republic. Opportunities of comparison and personal examination further the development of the highest industrial agencies, and open new channels of exchange and profit.

Probably the greatest commercial result achieved by the exposition was the demonstration of the progress made by this country in manufactured articles; notably silverware, furs, hats, pottery, etc. The palm has long been conceded to America for the invention and construction of machinery, but it was a genuine surprise to most natives and foreigners to find that the workmanship of American artisans could compete with the skilled labor of Europe, perfected by centuries of experience and inherited cunning. Whether it be due to the higher average intelligence of the American workmen, their superior adaptability to the conditions environing their craft, the inspiriting effect of our free institutions or to still other causes must be left to economists. The facts speak for themselves and are incontrovertible.

The amount of commercial growth stimulated by the exposition is an unknown quantity and a matter of speculation only. Much may be attributed directly to it, but by far the greater share lies in the quiet change of methods and the application of newly-acquired ideas and hints, which will in time develop into an enormous increase of business and improvement of business relations.

The artistic success of the fair was a deep gratification to the pride of the American people. Never before had the attempt been made to construct in symmetrical relation buildings covering 100 acres of

land, and grounds comprising over 600 acres. The breadth of conception, vigor of execution, and harmony of detail with which it was accomplished has won the admiration of the world. The fair, its architecture and its landscape gardening are now matters of history and need no further comment, but Americans may well be pardoned the indulgence of the belief that the coming century will witness nothing of artistic creation that will equal or surpass it.

During the six months of the fair there were 21,477,212 paid admissions, from which the gate receipts exceeded $10,000,000. Nearly $4,000,000 was also derived from concessions. Undoubtedly, had the western railways lowered their rates earlier in the season, a much larger attendance would have resulted; possibly enough to have exceeded the Paris attendance of 28,000,000 in 1889. In making comparisons, however, it must be borne in mind that the admission fee in Paris was only one franc, or less than half that at Chicago. One of the most striking features of the attendance was the behavior of the American crowd. Throughout the whole exposition there were fewer cases of drunkenness and disorder than are brought daily before the police court of any medium-sized city. The hearty good-will and even temper which characterized the throng at all times stood the test even of Chicago day, to the expressed wonder and surprise of our foreign visitors. The grand beauty of the park seemed to touch their sensibilities as it could no other nation's, and to demand and receive from them their patriotic homage. It was a splendid commentary on the intelligence, appreciation and restraint of the American citizen.

Such an exposition is a universal educator. It breaks down the barriers which ignorance and distrust of the qualities and resources of our neighbors have raised, and aims a deadly blow at provincial prejudice and conceit. The thousands whose lives had heretofore been lived within their village bounds have returned home better and broader citizens. The dwellers in cities, who have fancied that the world revolved around their municipal boundaries as its hub, have a better estimate of their relation to the world's progress. The mass of the American people have a clearer knowledge of the ability and power of other nations, while the foreigner has a better idea of the extent and resources of our vast republic. The fair will pay as a national investment.

Much was expected from New York State because of its position as leader in population, wealth, manufactures, commerce, art and agricul-

ture. Much was, therefore, demanded of the New York Board of Managers of time, of thought, of organization and of wise expenditure of money. For a correct appreciation of the amount of work done and products displayed, the people of the State are further referred to the accompanying departmental reports and catalogues. From the comments of the press, from the plaudits of the visitors and from the consensus of opinion of the juries of award, the New York Board of World's Fair Managers in laying down their labors feel content to leave to the judgment of their fellow-citizens the question whether or not their work was well done and a credit to the Empire State.

# REPORT OF THE BOARD OF WOMEN MANAGERS.

BY MRS. FLORENCE C. IVES.

The act of the Legislature which created the Board of General Managers of the New York State Exhibit at the Columbian Exposition contains the following paragraph as a portion of section 4: "The Board of General Managers shall appoint a Board of Women Managers of such number and to perform such duties as may be prescribed by the Board of General Managers."

Of the rules and regulations of the General Managers No. XI appertains to women. It reads:

"The Board of Women Managers shall consist of twenty-one women, residents of the State and appointed by the Board of General Managers. They are to work in conjunction with the general managers in promoting the interests of the World's Columbian Exposition, and to assist the representative women of the nation in obtaining for that occasion a full and complete portrayal of the industrial and social conditions of woman and her achievements and capabilities in all the avenues and departments of life, and, therefore, they shall be and hereby are empowered to exercise such authority and control in their department as shall be consistent with a liberal construction of the act of the Legislature creating the board, and with the rules herein adopted. They shall meet in the Capitol, at Albany, upon the call of the chief executive officer, and proceed to organize by electing a president, first and second vice-presidents and a secretary. As soon thereafter as practicable they shall elect an executive committee of six, who shall have all the powers and rights of the full board when in session.

"The said board shall establish its bureau in the rooms of the Board of General Managers, and shall have such clerical aid as the chief executive officer may provide. The Board of Women Managers, or its executive committee, shall make regular monthly reports to the Board of General Managers, or more frequently if so requested. The sum of $25,000, or so much thereof as may be necessary, is hereby set apart for the maintenance and expenses of the said Board of Women Managers, and all expenses shall, as far as practicable, be estimated, and the consent of the Board of General Managers obtained thereto before they shall be actually incurred. The president of the women's board, the chairman of its executive committee and the secretary of the women's board are hereby constituted an auditing committee, who shall audit and approve all bills for expenditures. When so approved the regular auditing committee of this board may approve of the same, and thereupon the said bills shall be presented for payment as provided by law. The Board of General Managers reserves to itself the right and privilege of presenting such further rules and regulations for the guidance of the Board of Women Managers as shall, from time to time, seem expedient.

MRS. ERASTUS CORNING, PRESIDENT BOARD OF WOMEN MANAGERS

"The Board of Women Managers may be called together from time to time, as shall seem expedient to the Board of General Managers."

On June 3, 1892, the Board of General Managers appointed the following twenty-one women, representing the eight judicial districts of the State, as the Board of Women Managers for New York: Mrs. Wm. J. Averell, Ogdensburgh; Mrs. Frederick P. Bellamy, Brooklyn; Mrs. Erastus Corning, Albany; Miss Caroline E. Dennis, Auburn; Mrs. Arthur M. Dodge, New York city; Mrs. Fred R. Halsey, New York city; Miss Annie Hemstrought, New York city; Miss J. Imogen Howard, New York city; Miss Maria M. Love, Buffalo; Miss Elizabeth T. Minturn, Hastings-on-the-Hudson; Miss Frances Todd Patterson, Westfield; Mrs. Leslie Pell-Clarke, Springfield Centre; Miss Anna Roosevelt, New York; Mrs. Dean Sage, Menands; Mrs. J. S. T. Stranahan, Brooklyn; Mrs. Oscar S. Straus, New York city; Mrs. George Waddington, New York city; Mrs. Charles F. Wadsworth, Geneseo; Mrs. H. Walter Webb, Riverdale; Mrs. Andrew D. White, Ithaca; Mrs. Howard G. White, Syracuse. Miss Minturn declining to serve, the board appointed Mrs. Frederick Rhinelander Jones, of New York city, in her place.

In making their appointments the Board of General Managers selected two women from each of the eight judicial districts of the State with five in addition from New York city, the field there being so large as to demand a greater number of workers.

The first of the four meetings of the Board of Women Managers was held at the Capitol, Albany, June 7, 1892. Seventeen of the twenty-one women were present and took the oath of office. One of the absentees was Miss Elizabeth T. Minturn, who never served, although her name remained on the list of members for many months, and was only dropped when Mrs. F. R. Jones was appointed in the summer of 1893 by the Board of General Managers.

The officers elected at the first meeting retained their positions, with the exception of two members of the executive committee, until the organization was dissolved. At the first meeting also the bureau of applied arts was projected with Mrs. Candace Wheeler, president of the Society of Associated Artists, as director. The following rules and by-laws were adopted:

"*Article* 1. The official title of this organization is 'Board of Women Managers of the State of New York at the World's Columbian Exposition.'

"*Art.* 2. The purpose of this board shall be to secure a full and complete portrayal of the industrial and social condition of woman and her achievements and capabilities in all the avenues and departments of life.

"*Art.* 3. The officers of the board shall be the president, first and second vice-presidents, secretary, treasurer and executive committee of six members and an auditing committee of which the president (and in her absence one of the vice-presidents), the chairman of the executive committee and the secretary shall be members.

"*Art.* 4. The meetings of the board shall be held on the call of the president, vice-president or any four members of the board. Notifica-

tion mailed at Albany to the addresses of the members forty-eight hours before the time of the meeting shall be deemed sufficient notice.

"*Art.* 5. A quorum shall consist of seven. The office shall be in the Capitol, at Albany.

"*Art.* 6. The executive committee shall consist of six members; in addition thereto the president and secretary shall be ex-officio members of the said committee. The said committee may make its own rules and regulations provided they do not conflict with any adopted by this board or by the Board of General Managers. The said executive committee when the board is not in session shall have all of its powers and rights.

"*Art.* 7. The president shall have all the powers and privileges incident to her office. In the absence of the president, one of the vice-presidents, in order of precedence, shall perform the duties and exercise the powers of the president. The secretary shall keep accurate records of all the business transacted by the board and by the executive committee. She shall have charge of the correspondence of the board and of the executive committee, and shall perform such other duties as the board or executive committee may direct.

"*Art.* 8. The treasurer shall have charge of all the moneys intrusted to her care and shall make report from time to time of the amounts expended.

"*Art.* 9. The auditing committee shall examine and audit all bills and accounts of the board and of the executive committee.

"*Art.* 10. There shall be a department known as the bureau of applied arts, which shall have charge of all matters referred to it by the executive committee or by the board. This bureau may be established in the city of New York, and its operations controlled by the executive committee.

"*Art.* 11. There shall be an official seal for the exclusive use of this board.

"*Art.* 12. Amendments of the by-laws shall be made only by the affirmative vote of five members."

Mrs. Ralph Trautman, first vice-president of the National Board of Lady Managers, who always loyally rendered her aid to the New York board, and Mrs. Susan G. Cooke, secretary, were invited to be present at the first meeting of the women managers and gave much information relating to the women's department of the exposition. The newly appointed managers, however, felt themselves exceedingly inexperienced, and the president appointed a committee to go to Chicago to consult Mrs. Palmer and become familiar with the different lines of work. This visit proved to be of immense value, particularly as a means of inspiration, the committee going to the offices of the National Board and holding consultations with Mrs. Palmer and other officials. At the suggestion of the Board of General Managers the women visited New York on the occasion of the Columbian celebration, October 12, 1892, and Chicago a week later when the exposition buildings were dedicated. The women managers felt the necessity at once of making an attempt to interest the women throughout the State in the exposition and plans for arranging work in the different judicial districts

were early determined upon. As there could not be a systematic division of the counties, to the New York city members was assigned the first judicial district (one county); to Mrs. Stranahan, the second (nine counties); to Mrs. Corning and Mrs. Sage, the third (seven counties); to Mrs. Averell, the fourth (eleven counties); to Mrs. Howard G. White, aided by Miss Dennis, the fifth (six counties); to Mrs. Pell-Clarke, aided by Miss Patterson and Mrs. H. A. St. John, the sixth (ten counties); to Mrs. Wadsworth and Miss Dennis, the seventh (eight counties); and to Miss Love and Miss Patterson, the eighth (eight counties).

It will be noticed that the name of Mrs. H. A. St. John takes the place of that of a manager, and it should, therefore, be explained that upon the invitation of the executive committee and at the request of Mrs. Wadsworth, Mrs. St. John, of Ithaca, kindly consented to undertake the organization of Mrs. Andrew D. White's counties, the latter having gone to Russia almost immediately after the Board of Women Managers was formed. A resolution thanking Mrs. St. John for her efforts was unanimously adopted at the meeting of the board held January 11, 1893.

Several methods of organizing the counties were employed; some of the managers wrote letters to clergymen, others to the supervisors, asking for names of prominent women who would form in sub-committees for the work. One manager in her counties enlisted the interest of a woman in each of the large towns, and made her chairman of a sub-committee, most energetically sending her letters of inquiry every week. Another manager held meetings in the different counties, drawing together circles of women who afterwards served in committees. In all instances a spirited correspondence was carried on between committee women and managers, printed circulars were distributed, and the interest of the press sought, and in a few months' time the entire State was not only thoroughly aware that an exposition of unusual importance was to take place, but that women were to have a prominent part in it. Most of the standing committees on the board found their counterparts in the sub-committees, and the work of collecting statistics; of searching for books by women authors; of bringing forward the work of women in the applied arts; of securing loans for the colonial, lace and other collections, and in fact of making manifest women's work in every department, was enthusiastically carried on during the autumn of 1892 and the winter of 1893. All these women, who may now be numbered by hundreds, gave their time and often their money to the work, without either hope or wish for compensation, and the managers feel that they, and the entire State, owe these women a deep debt of gratitude for their energy and zeal.

Of the creditable individual exhibits it is only possible to speak in the most cursory manner. Nearly 200 applications passed through the office of the women's board, a number of these being necessarily rejected, as not reaching the high standard demanded, but this does not by any means represent the number of applications made, as many were sent directly to the National Board, and by it accepted or rejected.

Credit should be given to Miss Mary Martin, an amateur photog-

rapher of New York, who at the request of Mrs. Pell-Clarke, took some pictures to illustrate hop culture in this State. The photographs proved to be most successful, and formed an interesting feature of the agricultural exhibit of New York.

Through Mrs. Trautman, Mrs. Gillespie, chairman of women's work at the Centennial Exposition, offered to loan the New York State board the two fine banners that were presented to the women of Pennsylvania by the women of New York (the latter raising $4,000 for the purpose), in recognition of the work they had done for the Centennial Exposition. The banners were gratefully accepted, and, by permission of the national board, were hung in prominent places in the Woman's Building during the term of the exposition.

Another banner, which has now become of historical interest, as it has a prominent place in the Capitol, at Albany, was one exhibited in the State building during the exposition, and presented through Governor Flower to the State by the Board of Women Managers. It is of white water silk, shimmering with threads of gold, and displays in rich embroidery the arms of the State.

The National Board had the establishment of a children's department very much at heart, but, having no appropriation for the expenses, decided to tax each State with a portion of the cost of the building, and, at the first meeting of the New York Board of Women Managers, that organization became liable for the pro rata assessment of $2,000, which was afterwards paid from their appropriation. It had been early advised by Mr. John Boyd Thacher of the New York Board of General Managers, that great care should be given to the selection of a seal, and he suggested as a design the story of the fisherman's wife, who, in holding out a torch for her husband to guide his return, unconsciously welcomed Columbus on the night of October 11, 1492. The idea met with favor, and the subject was referred to the bureau of applied arts, and Mrs. Wheeler's taste and experience sought. As a result she was authorized to ask for sketches from several women artists, and from the designs submitted, one by Miss Lydia Field Emmet was selected and much admired. The drawing displayed an Indian woman in graceful pose standing on a rocky shore and holding a lighted torch far up above her head as a beacon for a ship that was sailing in toward the land. Encircling the drawing was the lettering: "New York State Board of Women Managers for the World's Columbian Exposition, 1893."

Upon inquiry it was learned that to have the seal cut would cost several hundred dollars, and the executive committee decided that this expense was unnecessary, as the seal would but seldom have practical use, and directed instead that the design should be reproduced on the official paper and upon cards to be affixed to the State exhibits.

A badge having been selected by the National Board as a sign of office, it was suggested that the New York State women managers should provide themselves with badges. Through Mrs. Wheeler several sketches were submitted, and one made by Miss Martha D. Bessey, a designer at Tiffany & Co.'s, was selected. This was a circle a little larger than a half dollar on which appeared the globe flanked

MRS. DEAN SAGE, CHAIRMAN EXECUTIVE COMMITTEE BOARD OF WOMEN MANAGERS

by an eagle whose beak, whether from intention or otherwise, touched the point on the globe where New York appears. The name of the organization was lettered below, and stalks of ripening corn were intertwined in graceful fashion. The circle was pendant from a bar on which were the open-worked letters: "New York."

When plans were being made for transferring the office and business of the board to the State building upon the exposition grounds, it was recognized that it would be proper to institute some form of hospitality to visitors and to the National and State boards. The managers at no time desired a lavish expenditure for entertainments, as money in this way could be so easily wasted, but it was proposed to keep open house, so to speak, every day in the week except Sunday. In this way the five o'clock tea, at which nothing but tea and biscuits were served, became a regular institution and brought to the board many flattering expressions of approval.

A room on the second floor, adjoining the banqueting hall and under one end of the gallery, had been indicated by the architects as a tearoom, and it was this circumstance that suggested the idea of giving afternoon teas. This room was the cosiest of the suite generously assigned the women. There were several handsome pieces of old furniture in it, and some modern chairs daintily upholstered in cretonne. The window was hung with pretty muslin, and there was a general air of ease and comfort that tired visitors appreciated. The room opened on one side into the so-called women's committee room, and it was almost always necessary to use this as well as the tearoom for the guests. It was not possible to invite every New Yorker who visited the State building to join the ladies in the tearoom, but it only required a simple introduction to secure a welcome there, and many distinguished foreigners and Americans made the building a rendezvous at the tea hour. The inaugural tea took place June second, on the occasion of the first visit of Governor Flower to the exposition, when he was accompanied by Mrs. Flower. Other notable teas given during the exposition season were those to Governor Flower and his staff, on New York and Manhattan days, to the people of Brooklyn on Brooklyn day, to Secretary Carlisle, to General and Mrs. Miles, and to the West Point cadets; to Mrs. Potter Palmer and Mr. and Mrs. Fred. Grant, and to Miss Emily Huntington.

From the beginning of the work to its end it has been the earnest endeavor of the board to spend the State's money with the strictest economy consistent with dignified representation of the work it undertook. The women at first had but a very faint idea of what the expense would be, but before many months had passed they were very clearly aware that the first $25,000 would not even half pay for the demonstration in exhibits, etc., of women's work in New York State.

The National Board looked to the Empire State for a more than ordinary display in every line, and the women were desirous of fulfilling the duties expected of them. Almost as soon as the second $25,000 had been granted they entered a request for $10,000 more, and pledged themselves to keep within this amount.

Among the resolutions offered by the board was one requesting Con-

gress to amend the act providing for the dedication of the exposition buildings, changing the words "twelfth of October" to "twenty-first day of October." An important resolution was that in favor of the Sunday opening of the exposition. The resolution was enthusiastically passed with only one dissenting voice, and occasioned both favorable and unfavorable comment in the newspapers throughout the country. The women of the Shaker community showed their interest in favor of opening by preparing a petition signed by themselves, and presented to Congress through the New York board.

### EXECUTIVE COMMITTEE.

In large organizations the power of transacting business is placed in the hands of a small proportion of the members, and, as will have been seen by rule XI, the Board of General Managers following wise precedents, provided for the election of an executive committee of six. This committee was given the rights of the board when in session, and has exercised its authority from the beginning, thereby preventing any great delay in making necessary decisions in regard to the business. The president of the board and the secretary, being ex-officio members of the executive committee, attended the meetings. Up to the time of the final board meeting held at Albany, January 17, 1893, there had taken place twenty meetings of the executive committee, all of which had been faithfully attended by its members. Minutes of these meetings were printed and sent to each member of the board in order that the general business might be known to all. As the by-laws of the executive committee provided that three members might transact urgent business, this plan was followed in a few instances where speedy decisions were necessary. At no time, however, during the entire work, was a decision of any moment made without the chairman's judgment having been obtained.

The first meeting was held June 28, 1892. While the by-laws provided for a bi-monthly meeting, this rule was not strictly adhered to. Only three meetings were held in the summer of 1892, as the ladies were widely separated and could not conveniently leave their homes. Mrs. Ives was expected to keep general supervision of the work and to report to the chair from time to time as seemed necessary. It was impossible to foresee the exact necessities of the exposition work, and at the executive meeting of June twenty-eighth, a local committee made up of New York city and Brooklyn members was formed, as well as the committee on women's work in literature, literary clubs and the press. The meetings of the former committee were held bi-monthly, on Tuesdays alternating with the executive meetings, as much work was concentrated in New York. Arrangements were also concluded for the establishment of the bureau of applied arts in New York city. Also at this meeting a motion was adopted that a letter should be sent to Halsey C. Ives, chief of the Fine Arts department, requesting that the names of two women artists should be added to his committee on fine arts. As the main object of woman's interest in the exposition was to obtain rightful recognition of her work, it was believed a wise move to call the attention of the head of the art department to the

fact that women had been ignored on his committee. It should be mentioned here that the letter was sent, and resulted in bringing about a somewhat unpleasant controversy. Mr. Ives intimated that he was in favor of the appointment of women but that the full complement of his committee had been made up, and the question as to whether any more members should be added would have to be decided by the committee itself. The New York artists were divided in their opinion on the subject and the matter remained undecided for a long time. It was finally announced that Mrs. Mary Hallock Foote and Miss Mary J. Cassatt had been asked to serve.

It was decided at the first meeting of the executive committee that there should be an exhibit of laces, fans, miniatures and antique embroideries. How numerous were the delays and how great the anxiety and worry connected with this committee's work may be understood when it is said that it was decided as early as June, 1892, to make the exhibit and practical work was only begun late in March, 1893. At the second meeting of the executive committee the subject of decorating the library of the Woman's Building was discussed, and an appropriation of at least $5,000 was deemed necessary for the purpose. The Board of General Managers, to whom the matter was referred, authorized this expenditure. Although there were at times some disagreements between the two boards, the general managers never interfered with such distribution of the women's fund as the Board of Women Managers saw fit to make. The Board of General Managers requested, however, that they be kept informed as to the appropriations.

As the chairmen of all standing committees were members of the executive (with one exception), the work of these different committees was always fully reported at each meeting of the executive. New plans were submitted as well as questions of expediency and finance. No one had dreamed of the amount of detail that would have to be gone through, and the managers, especially the members of the executive committee, found themselves overwhelmed with work. As the result proved, in spite of the limited time, the work was undertaken with energy and enthusiasm.

The proposition to establish a model hospital at the exposition was early brought before the executive by Miss Dennis, the idea being to show the methods of the trained nurses of New York, where the system of schools for trained nurses originated in this country. Just how this matter developed will be shown in the report of the philanthropic committee.

The subject of an exhibit of the kitchen garden system was introduced at the board meeting of September seventh, but it was the executive meeting of September twentieth that the details of Miss Huntington's plans were submitted and appropriation made of $2,500 to carry on the work. At the meeting of the executive committee, November fifteenth, Mrs. Howard G. White's name was dropped from the membership, as she had not been present for three consecutive meetings and had sent in no report. The ladies felt that the time was very short for the completion of the work, and it was necessary that the executive committee should consist of active members. Miss Dennis consented to visit

Syracuse and organize the work of the fifth judicial district. It was afterwards learned that Mrs. White was in ill-health, but when Miss Dennis reached Syracuse she received the kind co-operation of Mr. H. G. White in organizing the district. Mrs. A. M. Dodge was elected to take the place of Mrs. White on the executive committee, and upon the resignation of Mrs. Webb, Mrs. Wadsworth was appointed in her stead. As the board included a member of the Afro-American race, a recognition that no other State had shown this people, the women were particularly desirous of giving prominence to the arts and industries of the women of that race, and it was early decided by the executive committee to place in the hands of Miss Howard the entire charge of the collection of exhibits, as well as statistics of this department. The record of her work is made in its proper place, and it only needs to be added here that Miss Howard accomplished her several tasks as only a woman with remarkable energy and executive ability could. On account of the absence of Mrs. Andrew D. White her portion of the State, which consisted of five counties, had also been neglected. Mrs. Wadsworth, who was present at the meeting of the executive committee on November fifteenth, offered to visit Ithaca at once and place the work in competent hands. A detailed account of the method of organizing the different districts has already been given, but mention is made of the subject here because the extra work was done through the action of the executive committee. At the meeting of December sixth the proposition was presented through the New York local committee to prepare an historical doll exhibit, the dolls to be dressed to represent different periods since the time of Columbus.

An exhibition of colonial relics was proposed when the board was first formed, as the National Board had desired representation from the thirteen original States. The task of making the collection was a difficult one, and it was only at the meeting of the executive committee of January tenth that Mrs. F. R. Jones, who had been invited and had consented to take charge of the exhibit, presented her plan which required an appropriation of from $5,000 to $10,000. Mrs. Dodge reported at this meeting that it would not be possible with less than $2,500 to carry on the Fitch Crèche and Day Nursery exhibit in the children's building, work that came within her jurisdiction as chairman of the philanthropic committee. This exhibit cost a still larger sum before the end, but was one in which the entire board took the greatest interest and satisfaction.

The executive committee exerted its influence at all times to induce well-known organizations of women, whether of business, educational or philanthropic interests, to find representation at the exposition, so when it was learned that Miss Grace H. Dodge was finding some difficulty in settling upon a place for exhibiting the idea of the working girls' associations, an idea not easy to classify, the executive committee urged her to enter her exhibit in the organization room of the Woman's Building as educational work, and offered to aid in obtaining space, they deeming that the exhibits from women of New York State would be incomplete without a representation of the working girls' clubs. In the same way an exhibit from Miss Potter's children's outfit estab-

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lishment, an outcome of the working girls' associations, was solicited, but although Miss Potter took up the plan with enthusiasm, the outlay demanded was found to be too great and it was given up. Unfortunately there was a limit to the funds in the hands of the managers, and they were unable to accede to many requests for financial aid in the preparation of exhibits. Mrs. Hopkins' School of Applied Design was recommended to the National Board for exhibition.

The astronomical work of Mrs. Anna Palmer Draper, the wife of the late Prof. Draper, was considered of such importance that a correspondence was opened with her in the hope that she would consent to find a means of making demonstration of it in the Woman's Building. Mrs. Draper manifested a desire as a New York woman to co-operate with the women, but upon consultation with Prof. Pickering, director of the Harvard College Observatory, she wrote that she wished to abandon the idea as the duplication of the work done for the Harvard College exhibit might detract from the exhibit. Mrs. Elizabeth G. Britton, wife of Dr. Britton of Columbia College, was urged to make an exhibit of her work, and there was hope at one time of obtaining from her a unique collection of mosses about which she is said to have greater knowledge than any other woman in America, but she found she would not have sufficient time.

A rare exhibit of ferns, collected by Mrs. James Watson Webb, was arranged by Mrs. Britton in winged frames and shown in the scientific department of the women's building.

The executive committee appointed an installation committee with the executive committee as ex-officio members, to attend to the necessarily arduous task of installing exhibits at the opening and returning them at the close of the exposition, of which Mrs. Wadsworth consented to act as chairman. At this time, March, 1892, only one appropriation of $25,000 had been made for the women's board, and the executive, in making estimates of expenses, found that even with an additional allowance of $25,000 from the second $300,000 just granted the New York State commission by the Legislature, they would not have sufficient means to carry out their work as it had been planned. Upon referring the matter to the general board they were advised to make application for an extra $10,000 in the supply bill. This appropriation was granted and the women gave a promise that they would make no further appeal for money, and having pledged themselves to keep within this limit they closely considered every new outlay.

A small provision was made for the knitting mills' exhibit, Mrs. Ives being given charge of the details, and suitable cases were also voted for the autographs of famous women, which Mr. Thacher had generously loaned to the managers for exhibition in the Woman's Building.

## NEW YORK LOCAL COMMITTEE.

Three members of the executive committee being residents of New York city and Brooklyn, they early suggested that there should be a local committee to take charge of the work there, and one was formed of all the members of the board from the first and second judicial districts, ten ladies in all, with Mrs. H. Walter Webb as chairman. A

general invitation to attend the meetings, which were held twice a month, was extended to the members of the sub-committees in these two districts, and to Mrs. Trautman, as it was felt that an interchange of ideas in regard to the exposition work would be very beneficial. Frequently the members of the New Jersey board were present by courtesy of Mrs. Webb, as they expressed a desire for such information as would come through the channels of a New York office. Miss Margaret Tomes acted as secretary for the local committee as well as for the bureau of applied arts, and the committee continued active work all through the autumn of 1892 and the winter and spring of 1893, having an office in common with the committee of applied arts.

### COMMITTEE ON PHILANTHROPY.

*Fitch Crèche and Day Nursery Exhibit.* At the second board meeting Mrs. Dodge reported that, at the time the New York committee of women made a visit to Chicago, Mrs. Palmer suggested to Miss Love the idea of exhibiting the Buffalo Fitch Crèche and training school for nursery maids with its kindergarten in order to show how day nurseries in large cities are managed, this being considered the most advanced philanthropic work on record, as the children are educated and the mothers rendered self-supporting. While at that time the Children's Building was little more than a dream, such a building had been decided upon, and it was now proposed to put to practical test there the day nursery methods. No exhibit of the kind had ever before been made, but its success was proved in the fact that between 10,000 and 11,000 children received its benefits and the day nursery system was thoroughly published, as these children came from every State and Territory in the Union. The philanthropic committee was somewhat discouraged just after the exhibit had been decided upon, because of the suggestion from several individuals engaged in philanthropic work, that infants might be left on their hands by a certain class of women, but only one instance of this kind occurred, and this was on the next to the last day the exhibit was open. The nurseries were on the west side of the Children's Building, and often as early as seven o'clock in the morning a line was formed of parents waiting to "check" their children for the day. If the quarters had been larger the number of children would have been almost unlimited. In order to better represent the State in this exhibit it was decided that the methods of the Buffalo Fitch Crèche and training school for maids should be shown the first three months of the exposition. Miss Love made her preparations to have the Fitch Crèche corps leave Buffalo in April, in order to open the exhibit the first of May, but having kept in communication with the Children's Building authorities she found that great delay had ensued in the erection of the building, and it was utterly useless to attempt to establish the exhibit at the time the exposition was to be formally opened. Not only did this prove to be impossible, but when she did go to Chicago the annoyances and delays she encountered were innumerable, principally owing to the unfinished state of the building. In spite of every endeavor to push the work the exhibit was not opened until June. A detail of the

day nursery work is the feeding of the children, and a kitchen and cook are a necessary part of the menage. There being but one kitchen in the building, Miss Love undertook also to prepare food for the children forming the exhibit of the home for the training in speech of deaf children from Philadelphia, under Miss Mary S. Garrett; so about twenty-five children were fed every day, in addition to the regular day nursery group. Miss Love personally superintended her exhibit, which was in charge of the matron, Miss Fanny Harris, the number of children taken care of averaging about fifty a day.

Miss Harris had three kindergartens and ten assistants at first, and thirteen during the latter part of her term. There were some details about the day nursery exhibit that are not necessary in the management of an ordinary nursery, as, for instance, the "checking" of the children. Three checks were used for each child — one to pin to the back of the dress, another to attach to the garments taken off, and still another to give to the mother.

Mrs. Dodge not being able to visit Chicago for more than a week at a time, her exhibit was established by her matron, Miss Margery Hall, who, with eighteen assistants, took entire charge of it after it was started on plans laid down by Mrs. Dodge. She was not hampered by any of the obstacles that beset Miss Love's first weeks, and three months of continuous work were possible. With the day nursery methods of New York city were exhibited the first training school for nursery maids, carried on in connection with the Babies' Hospital in New York. The total number of children taken care of during Mrs. Dodge's term was 7,000, an average of nearly 100 per day. Mrs. Dodge at one time had the arrangements nearly perfected for a complete exhibit of kindergarten methods, such as was successfully carried out by some of the Chicago associations in the Illinois State Building, but when the kindergarten associations of New York met to discuss the matter the exhibit was given up because of the lack of unity of opinion. Miss Love and Mrs. Dodge had in both the crêche and day nursery exhibits a kindergarten class for the older children, but this was intended only as an exhibit of kindergarten methods as adapted to the needs of the day nursery.

It was not easy to fix upon an appropriation that would cover the expenses of the nursery exhibit as there was no precedent for it, unless the fitting up and starting of an entirely new and very large nursery might be considered as one. Mrs. Dodge asked the board for $2,500, at the same time volunteering to raise a portion of the expenses by private subscription. Miss Love also received donations. A fee of twenty-five cents was charged for each child in order to cover the price of the food. The appropriation of $2,500 was exceeded, but the amount paid by the State does not represent the actual cost of the exhibit, nor can this be reckoned because of the variety of the gifts and loans. The work of the philanthropic committee would not have been complete without some representation from the training schools for nurses. The fact that the British schools of nursing established originally by Florence Nightingale, and representing the London hospitals in all their strength, and enjoying the patronage of the Duchess

of Cambridge, had already prepared a large and exhaustive exhibit appealed so strongly to the committee's patriotism, that some showing of the work done in New York and Brooklyn in that line seemed an absolute necessity. Many plans were proposed and discussed. The medical director of the exposition, Dr. Owens, was appealed to for a permit to establish a pavilion for the reception of patients who fell ill, or met with accidents within an indicated radius, and which should be cared for by the several hospitals in turn. This and other plans being absolutely refused by those in power in Chicago, a silent exhibit was the last resort. This was accepted at once and assigned space in the Anthropological Building which was not yet in course of construction. A small appropriation having been placed at the committee's disposal, seven of the largest hospitals of New York and Brooklyn signified their willingness to co-operate in the work. Bellevue's school headed the list, because of its being the first one established in this country, and was warmly seconded by the New York Hospital and followed by the Presbyterian, Mt. Sinai, New York City (representing Charity and Maternity of Ward's Island, and Gouverneur and Harlem hospitals), Brooklyn City and Brooklyn Homœopathic. Later in the summer the Women's Memorial Hospital of Brooklyn was added to the list in place of the Orthopedic Hospital of New York, which gave up its plan of exhibiting what they were doing for the deformed. Great credit is due to the already over-taxed superintendents of these schools for the courage and energy with which they undertook this rather intangible exhibit, determined to devise ways and means of demonstrating the benefits they were conferring upon humanity.

Bellevue contributed her medal and diploma won at the last Paris International Exposition, together with her report and text books, etc. Mt. Sinai followed with a complete list of surgical dressing baskets and other necessary paraphernalia belonging to the profession, while the Presbyterian Hospital furnished a model ward in miniature, with its medical surgical sides completely arranged with antiseptic appliances and nurses (dolls) in attendance, which attracted universal attention and seemed to enlighten people upon the modern improvements now adapted to hospital furnishing more than any other part of the exhibit. They all contributed uniformed dolls, pictures of their wards and nurses' homes, diplomas and various articles pertaining to the profession in the most generous way, and the committee desire to express herewith their appreciation of these efforts.

As the date of the opening of the exposition approached, and the Anthropological Building was still far from completed, space was assigned to this interesting exhibit, through Mrs. Potter Palmer's kindness, in the educational department of the Woman's Building. It received most gratifying attention from the public at large. Three medals — one for the Mt. Sinai school, one for the Presbyterian school and the third for the exhibit as a whole — were awarded. Justice demanded that each one of these schools should have been medaled alike, for each one showed some different branch of this system of instruction, and no effort was spared to secure this gratifying result, but argument and explanation proved of no avail, and while the com-

CENTRAL PANEL OF LIBRARY CEILING IN THE WOMAN'S BUILDING

mittee regret the fact, the superintendents should not feel that their good work was lost, for they contributed to the completeness of this exhibit, and have shown to the world the important part they bear in the struggle the hospitals are making against diseases and death, and how well they compare with the older schools of England and the continent.

Miss Emily Huntington had the kitchen garden exhibit entirely in her charge, subject to direction from the executive committee. The scheme of kitchen garden work, a method of developing in little children a knowledge of household duties, originated with Miss Huntington, who was in charge of the Wilson Industrial School for twenty years. It could, therefore, be shown as a purely New York exhibit, and the managers early felt an interest in presenting it at the exposition. Miss Huntington was invited to the board meeting of September 7, 1892, and there presented her plan for the exhibit. Such an exhibit had not been made before, and there seemed no way of showing the system other than by having children themselves demonstrate it every day. This would necessarily be an expensive undertaking, and the Board of Women Managers decided to allow Miss Huntington the $2,500 which she estimated it would cost, and within which limit she kept. Miss Huntington planned to have Chicago children give her the necessary aid, and she immediately received the co-operation of the Cook County Normal School and the Chicago Kitchen Garden Association, two or three of whose teachers became her assistants. Miss Huntington arrived at her post the last of April expecting to be able to establish her exhibit at once, but she found the formidable obstacle that hindered Miss Love. The rooms assigned to her in the Children's Building, two on the second floor, were unfinished, and she was obliged to bide her time, hastening the workmen from day to day by the authority of the chairman of the children's building committee. Miss Huntington was able to make exhibition of classes on the opening day, as she had been drilling the children in the gymnasium of the Cook county school, and an exhibition was made each day from the opening of the Children's Building till its close. It was no small task to make arrangements with the parents of twenty-five little girls to allow them to come to the grounds every day at three o'clock, and then with the exposition authorities for their entrance. The same twenty-five children were not obliged to come each day, Miss Huntington being aided by the normal school and mission children at stated times during the week. All the children had to be safely taken to and from the grounds in wagonettes. Miss Huntington's agreement was to direct the exhibit herself during the entire six months. The work was a severe task, however, and she was obliged to leave Chicago and come east for a stay of two months and a half. She left the work in the competent hands of Miss Larrabee, who had been a pupil of Miss Huntington's years before, and directed the classes each day. That great interest was shown in the exhibit was manifested by the number of people who crowded the room while the children were going through their exercises, and at other hours sought information about establishing work of the same character

in other cities. One hundred and seventy-five different children had the benefit of the instruction, and there is no doubt that the system will be started in many towns where it was unknown before the exposition. On the afternoon of October fourteenth, by invitation from the Board of Women Managers, Miss Huntington gave a reception and exhibition of her system in the New York State Building. One hundred children took part, and it was a very pleasant ending of a creditable summer's work.

COMMITTEE ON THE DECORATION AND FURNISHING OF THE LIBRARY.

The National Board requested the States to lend their aid in decorating and furnishing the Woman's Building. New York at once entered into the scheme with an offer to equip the library. A committee was formed with Mrs. Sage as chairman, but no work was undertaken until the autumn of 1892, except to obtain the consent of the Board of General Managers to an appropriation of $5,000 for the purpose. One of the rooms on the ground floor of the Woman's Building was at first designated for the library, but upon consultation with Mrs. Palmer it was found that these rooms had all been assigned to exhibits. With the advice and aid of Mrs. Wheeler, who was a member of Mrs. Sage's committee, the large west room on the second floor was secured, and Mrs. Wheeler consented to assume the direction of the decoration and furnishing, using her time and brain without stint in her labor of love. Five thousand dollars seems a generous appropriation for the equipment of a single room, but had not liberal loans been offered this sum would have been greatly exceeded. A second appropriation of $500 was found necessary, but as there has been a very fair rebate on the book cases the original appropriation will very nearly cover the cost. There were many unforeseen delays, and even by the forcing of labor the room was not completed until some time after the opening of the exposition. The most important loan was the ceiling. This Mrs. Dora Wheeler Keith designed and painted. The ceiling recalled that of some old Venetian palace in richness of color and style of composition, although the subject belonged to and was kept strictly in its place as a part of a great public library. It was composed of five large ovals or medallions holding groups of single figures, the spaces between being filled with connecting designs or bands of gilded ornament.

The exhibit of the decoration of the library received an award. A separate award was made Mrs. Keith for the ceiling.

COMMITTEE ON LITERATURE, LITERARY CLUBS AND THE PRESS.

A woman's library being one of the exhibits desired for the Woman's Building by Mrs. Palmer and her associates, the share that New York State women were to take in it was duly considered at a second meeting of the executive committee, and a committee on literature was formed with Mrs. Bellamy as chairman. At a subsequent meeting Mrs. Bellamy presented her scheme for exhibiting the work of women writers, which she deemed would be incomplete if it consisted only of a display of books. Her idea, afterwards developed, was to divide the

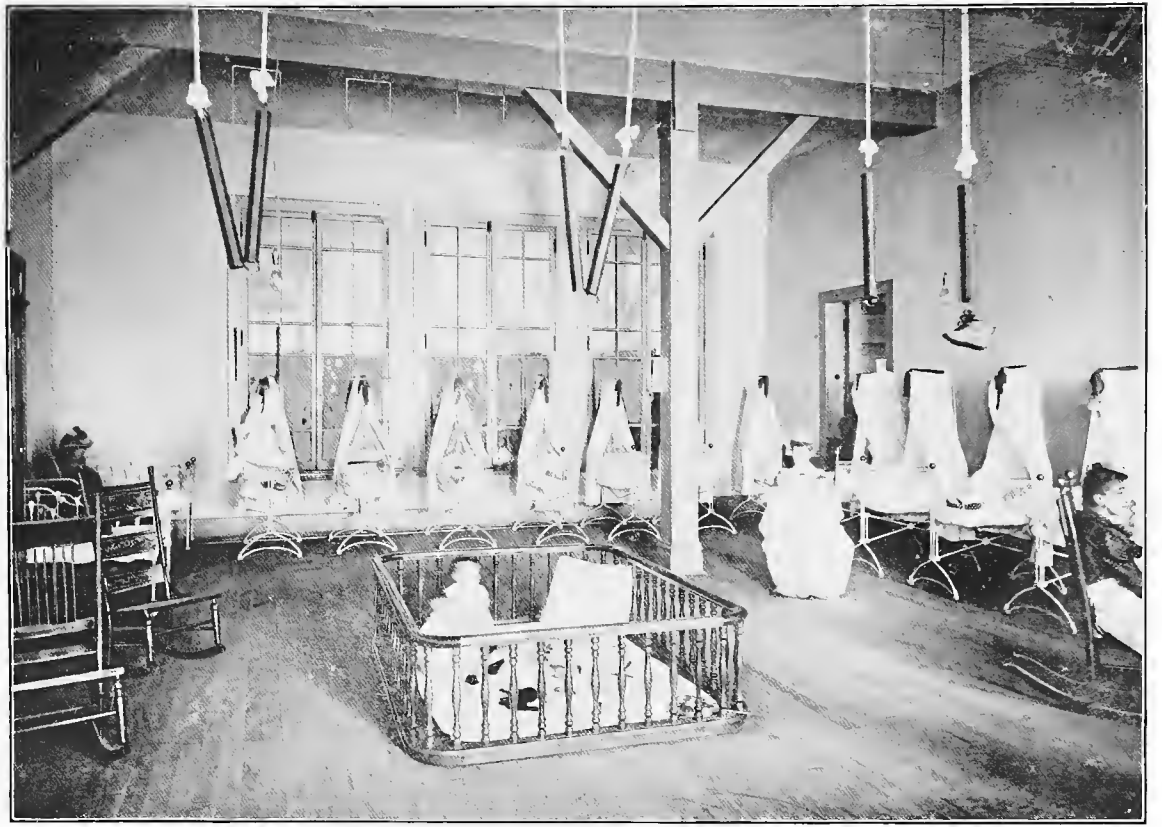
exhibit into three branches: *First*, an historical and chronological collection of all books written by women, native or resident of the State; *second*, a series of chronicles prepared by and representing every literary club which had been organized for more than three years, and, *third*, a record of the work done in the press and periodicals; the entire exhibit afterwards to be presented to the State Library.

Mrs. Bellamy succeeded in interesting three different organizations of women in her plan — the Wednesday Afternoon Club, in the collection of books; the Sorosis, in the gathering of data relating to literary clubs, and the Graduates' Association of Buffalo, in the preparation of statistics relating to work in the press and periodicals. The Wednesday Afternoon Club appointed a committee to undertake the collection of books with Mrs. Frederick F. Thompson, chairman, and Mrs. Charles Havens Royce, secretary. Sorosis formed a committee with Mrs. Phœbe A. Hanaford as chairman, and the Buffalo Graduates' Association acted as a committee of the whole with its president, Miss Charlotte Mulligan, as chairman. The labor that such a plan entailed was very great, and before the exhibit was finally placed in the Woman's Building, hundreds, possibly thousands, of women, in various parts of the State aided in different branches of the work. The books finally made a collection of over 2,500 volumes. The work of obtaining them was done with the utmost zeal and success by Mrs. Frederick F. Thompson, Mrs. Charles H. Royce, and their assistants in the Wednesday Afternoon Club, and also by many helpers in the different counties, notably Mrs. Henry Earle, Mrs. Wm. S. Packer and Mrs. Gordon L. Ford, in Brooklyn; Mrs. Francis A. Goodale, in Utica, and Mrs. H. A. St. John, in Ithaca. A vigorous correspondence was kept up, advertisements sent out broadcast, private libraries, book stores and book stalls ransacked, and every means that patience and ingenuity could devise was employed to insure the success of the work. Many publishers offered a copy of each of the books they had issued by New York women writers, and, generally speaking, authors, publishers, booksellers and friends were most kind and responsive. The collection of books consisted of children's stories, works of fiction, science, cookery and household economics, education, language, translation, original verse, compiled verse, travels, biography and memoirs, history, art, religion and miscellany. A copyrighted pamphlet was issued, containing a list of women authors and their works, asterisks being placed against the titles of the books sent for exhibition. Especial interest had been taken by the committee engaged in gathering books, because it had been stated that the collection would be shown by itself as a New York State exhibit. But in November, 1892, an announcement was received that the Board of Lady Managers desired to make a united exhibit of books, and that it was expected the collection from the New York board would become a part of it. Mrs. Bellamy brought the matter before the executive committee, and she was authorized to write to Mrs. Palmer that all the arrangements having been made to this end, the New York books must have place as a collective exhibit, or they could not be shown in the woman's library. She afterwards appeared before a committee of the National Board in Chicago, and placed the

matter before it in such a light that she was granted the required privilege.

Being desirous of securing something besides mere data in regard to women's work in periodicals, Mrs. Bellamy decided to have selection made of magazine articles under separate heads, and to show them in typewritten folios in the library. An advisory council was formed, and included almost every woman in the State of distinguished ability in periodical literature, to decide upon the articles to be selected; each of these women was made a committee of one to select the most brilliant articles under a certain head and write an introduction. In this way thirty-nine folios were prepared. As the work progressed one idea developed another and the literary committee decided to consult a publisher as to the desirability of reproducing some of the articles in book form. Mr. J. Henry Harper at once manifested an interest in the undertaking, and the result was that six little volumes were selected from the folios and published by Harper Brothers, under the title of the Distaff Series, a name chosen by the editor, Mrs. Lucia Gilbert Runkle, who gave no small portion of her valuable time to the work. Through the courtesy of Mrs. Palmer and the exposition authorities the books were placed on sale in the library. The exhibit from the literary clubs was presented in seventy-five folios, representing every club of prominence and many of the minor associations in the State. Each folio contained a history of the organization with its constitution and by-laws and four representative papers, which had been read before it. These folios were bound in russet Suede, carrying on the cover the name of the club and a large blue seal, stamped with the badge of the Board of Women Managers. The thirty-nine literary folios, together with the list of 3,000 women contributors to the press and periodicals, the latter being carefully revised by Mrs. J. C. Croly (Jenny June), and some model folios showing how the work had been done in the various counties, were similarly bound, except that the seal used was white instead of blue. The typewriting in all the folios bearing this white seal was done by Miss S. Louise Conklin, of New York, and her assistants, with the utmost care and perfection, in order that it might form in a secondary way an exhibit of model typewriting. All of the covers of the folios were of golden russet Suede designed by Mrs. Pryor of the Associated Artists. They bore on the outside the reproduction of the seal of the Board of Women Managers.

The first appropriation made for the literary committee was $300. As the work grew and it was found that the special printing and typewriting, besides other important items, would occasion large bills, the executive voted $3,000 in addition to the first sum. The latter amount has not been exceeded, but note should be made of the fact that the Wednesday Afternoon Club generously voted a subscription of $1,000, one of its members paying the rent of a room at the Bible House, and the services of a clerk during a considerable period when a place of deposit and a custodian were needed for the books. The literary clubs were required to do their own typewriting of records, etc., so the preparation of this branch of the exhibit was done without cost to the literary committee. With but two exceptions, none of the women



THE DAY NURSERY EXHIBIT.
(Children's Building.)

received the smallest compensation for their time, and the exceptions were made because it was absolutely indispensable to have the services of experts. At the close of the exposition the entire literary exhibit was removed to the Capitol at Albany, and placed in the State Library. The Governor of the State and the Director of the State Library have most kindly promised their aid in securing appropriations in the future, in order that this collection may every year receive the additions made to it by women throughout the State, in the belief that it is destined to become a collection of genuine historic value.

### COMMITTEE ON EDUCATION.

In making Mrs. Andrew D. White chairman of the committee on education at the first board meeting it was believed that the work, as directed by her, would have exceptional value. Unfortunately, owing to the appointment of Mr. White as Minister to Russia, and Mrs. White's subsequent departure, she was unable to take up her duties, and resigned from the chairmanship. Mrs. Bellamy, the first member of Mrs. White's committee, was at once urged to fill the vacant place, and only reluctantly acceded to the request that her name should stand as chairman, if an expert might be appointed to do the work, as her plans in connection with the literary committee demanded all her time.

Prof. Lucy M. Salmon, of Vassar College, was considered to be the woman most highly fitted for the position, and she was invited to represent the women's board. In accepting the position Prof. Salmon refused any salary or remuneration other than her expenses. Before Prof. Salmon began her work Mrs. Bellamy paid a visit to Mrs. Alice Freeman Palmer, in Boston, for consultation, and there learned that Massachusetts had already been at work over a year, and Mrs. Palmer was paying three experts to make the researches required for a creditable exhibit. This information was somewhat appalling, but only made the duties more exacting for New York.

The educational work for the State having been given into the hands of the secretary of the Board of Regents, Mr. Melvil Dewey, the women's educational committee and Prof. Salmon considered that the best way to bring out women's interests was to work in connection with the men's department, Mr. Dewey being entirely favorable to the plan. The work proceeded on these lines, aided to some extent by the members of the educational committee of the Board of Women Managers, and the sub-committees. Prof. Salmon gave her attention principally to private schools and women's colleges in this State, urging them to exhibit, but lent her valuable aid in a general way to the work of Mr. Dewey's bureau, which was comprised under three heads: *First*, that of public schools; *second*, that of private schools, including academies; *third*, of colleges and universities. The plan was to have a complete exhibit of certain great systems of education, rather than to have a little exhibition of smaller schools. The magnificent showing made by New York in all educational lines, in spite of limited time, is a fact to be pointed to with pride by both men and women.

## THE COOKING SCHOOL EXHIBIT.

In the last week of June, 1892, Mrs. Stranahan received a communication from Mrs. Palmer, expressing the desire that a cooking school exhibit should be made by New York State, as cooking schools had originated there. This was followed by other letters urging New York's acting, as New York alone was expected to have a cooking school. The exhibit was classed among educational interests, and, after a meeting of the executive committee, Mrs. Stranahan, as a member of the educational committee, was asked and consented to take charge of this department.

Miss Juliet Corson was named as the best exponent of the New York cooking school, but it was known she was in bad health, and there seemed little hope of her being able to take upon herself the responsibility. When the subject was broached to her by Mrs. Stranahan, however, she was found to be eager to assume charge of this important exhibit.

During the summer of 1892 Mr. Thacher suggested to Mrs. Stranahan that a restaurant might be established in connection with the cooking school; a contract was, therefore, drawn with articles to admit of conducting one. It was afterwards decided by the board that the proposition should be given up. Miss Corson was invited to appear before the board at the meeting of September 7, 1892, and then stated that she had made a complete plan for a cooking school exhibit, and that the board would not be required to furnish any financial aid. When asked how she proposed to pay the expenses of the exhibit, she replied in a manner of self-reliance in which the board was led to place great confidence. Miss Corson's professional ability was well known, and at this interview personal intercourse also made apparent her native gifts. She afterwards said that manufacturers with whom she had had dealings for years would aid her. A suggestion from the letter of Mrs. Palmer, whose comprehensive knowledge grasped even these details, that this might be a method of furnishing a model kitchen, added force to the proposition and it was accepted. The board expressed itself as very grateful that one exhibit could be made without an appropriation from the State.

There is no doubt now that Miss Corson undertook more than her strength would admit of her carrying out. There were other things also that militated against her success. Allowing that the manufacturers would have been glad to aid by sending their goods and cooking utensils for her use, there was a lack of enthusiasm among them for the exposition, and this, combined with the hard times, prevented her receiving the co-operation expected. Miss Corson had also relied upon the theory that New York would be the only State making an exhibit of cooking in the Woman's Building, conditions that soon became changed. Mrs. Palmer's plan was not to have Miss Corson director of the entire cooking school exhibit, as was first supposed, but to have Miss Corson's demonstrations at stated times during the week in alternation with other cooking school teachers. Every confidence continued to be felt in Miss Corson until it was found that she had prepared a

circular coupling the names of the Board of Women Managers with hers in issuing an appeal for funds to carry on the exhibit. Her judgment was then questioned, as later, when she refused to share the model kitchen in the Woman's Building with Mrs. Rorer, who had been promised it at certain hours to carry on the Illinois exhibit of corn cookery. Application was made to transfer the exhibit to the Liberal Arts Building, but a reply was telegraphed that a recent (March) decision of the management had prohibited any cooking in the Liberal Arts Building. Ground space was then asked for, and after a considerable time it was granted, south of the Anthropological Building. Miss Corson expressed herself as entirely satisfied with the situation, as it was near the space devoted to hygiene and sanitation and the Boston exhibit, known as the Rumford Kitchen, and she went to Chicago to establish herself. Meantime, as early as October, Miss Corson asked for a loan to tide over her financial difficulties until her location should become so assured that her appeals to outsiders might have solid basis. She was still hopeful of the final result, and Mrs. Stranahan brought the matter of a loan before the executive committee, with the effect that Miss Corson was requested to state what she would need. She replied, asking for $1,000, payable at the end of five months. Later, when it was learned that a portable house would be needed in which to make the exhibit, the executive committee took action to make the $1,000 loan to Miss Corson a permanent appropriation to cover the expense of the house. While the board was in no way bound to aid Miss Corson, because of her early statement that such aid was unnecessary, it felt some responsibility for the exhibit as it was announced as a New York State exhibit, and the board desired also to show its loyalty to Mrs. Stranahan on account of her untiring efforts to make it a success. Indeed, the acceptance by the board of the public-spirited and generous proposition of Miss Corson to require no appropriation from the State for her exhibit, gave to the board the necessity of accepting results without full exercise of judgment.

It was not from lack of interest or from neglect that the cooking school resulted in much less than had been hoped for and indeed expected. In making the admission the board desires not to blame Miss Corson, but to attribute her failure to her deplorable state of ill-health.

In the management of this exhibit allowance must also be made for the absence of a cooking school, properly so called, with demonstration lessons, on account of the difficulty of forming a class for instruction and holding it long enough for it to receive the lessons because of the hastening of visitors from exhibit to exhibit. This flitting tendency was both proven and obviated in the exhibits in the Children's Building by locking the doors against egress during exercises. In the one other cooking school in which demonstration lessons were given, except the exhibit in corn cookery, the class for stated hours of instruction was secured from residents of Chicago. Miss Corson's ability was recognized by her appointment to the distinguished service of judging the food exhibits. She also received an award for "demonstrations in hygienic dietetics, the medical properties of foods and the operations of chemical and economic household science."

## AFRO-AMERICAN EXHIBIT.

When Miss Howard began her exposition work she hardly knew in what direction her efforts would do the most good to the women of her race, but she had an earnest desire to aid them by bringing before the public statistics in reference to their employment, an account of their progress and samples of their best work. She was given authority by the executive committee to form her own committees and follow such lines as she considered best. Whatever may be the result, too much praise can not be given Miss Howard for her untiring and almost ceaseless work during about two years. As she is a New York city public school teacher her time was not her own, and her out of school hours were greatly taxed. During the vacations she visited the surrounding and sometimes distant towns to organize sub-committees, and she sent written and printed appeals all over the State to arouse the women of her race to a knowledge of the importance of the occasion. She early made up her mind that these women could not, except in a few cases, compete with others in the different lines of women's work, and when it was suggested by the executive committee that the Afro-American exhibit should be made by itself in order to give it a larger scope, urged by some members of her committees who claimed to see the advantage of such a division, she went to work earnestly to collect an exhibit that might show to some degree on what lines progress is being made.

Miss Howard's first efforts were in the direction of statistics. In making her researches she came upon so much that was interesting outside of New York, that she was authorized to extend her efforts to other States. She, therefore, enlisted the aid of colored editors of newspapers, the teachers in schools all over the country and others whose positions gave them a knowledge of their people. In this manner and also by forming associations of women in Philadelphia, Washington and Boston she gathered together a most valuable collection of information. To Philadelphia was assigned the interests of the Middle Atlantic States; to Washington was given the task of obtaining statistics about women in the South and West, and to Boston the facts concerning New England women. These committees finally asked permission to confine their reports to the cities of Washington and Philadelphia and the State of Massachusetts. Not willing to give up the original plan of obtaining authentic information from the different sections of the United States, Miss Howard personally addressed letters of inquiry to over 1,000 women, from whom extremely gratifying reports were received. The data relating to New York State colored women was incorporated with the statistics arranged in charts by Miss Roosevelt's committee, while the general information was carefully and neatly transcribed by Miss Howard herself and sent to the State board. It was found that those colored women who had done the most to show their capabilities are teachers, authors, artists, doctors, designers, musicians, nurses (trained), engravers, missionaries, lawyers, inventors, clerks, librarians, bookkeepers, editors, etc. The facts obtained made a number of pages of tabulated statements and it was at once decided

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THE KITCHEN GARDEN EXHIBIT.
(Children's Building.)

that these pages should be bound and placed on exhibition. The book rested on a table bookcase in the south record room of the Woman's Building during the exposition, and has since been removed with the other records to the State Library.

The Afro-American exhibit was a varied collection of articles, chiefly the handiwork of colored women with a few interesting loans. The case in which it was exhibited was furnished for the purpose by the National Board, who desired to show their interest, and stood in the southwest room leading from the gallery of the Woman's Building. The statuette of "Hiawatha" by Edmonia Lewis, a colored woman sculptor of note, was with some difficulty obtained as a loan by Miss Howard, aided by the chairman of the executive committee, from the Boston Young Men's Christian Association, and this was shown in the library.

The only theft from any of the New York exhibits was made from the Afro-American collection. The door of one of the cases was found open one morning in July and a gold chain with ear-rings and brooch extracted. The occurrence was at once reported to the department of secret service, but the thief was never detected, and, therefore, the articles were never recovered. The board regretted the loss and felt that the exposition authorities should make restitution to the owner. President Higinbotham was addressed on the subject, and half the value of the exhibit, which was placed at $210, was obtained from the exposition company, the board of women managers paying the owner the remainder. The Afro-American exhibit received an award.

### COMMITTEE ON THE COLONIAL AND REVOLUTIONARY EXHIBIT.

Mrs. Ralph Trautman, New York's representative on the National board, informed the State board, at the meeting held in September, 1892, that a committee had been formed for the purpose of preparing a colonial exhibit for the exposition. She told the ladies that in order to make the collection a success the State boards would have to co-operate by organizing committees. The matter was not acted upon at once, in fact the members of the board felt themselves already sufficiently taxed, but later Mrs. F. R. Jones, who was asked to fill a vacancy on the Women's Board, was invited and consented to take complete charge of the colonial exhibit, asking an appropriation of $10,000. As she had no definite idea of the cost of such an exhibit, but knew the charges for insurance would be heavy, the executive committee, although anxious to aid Mrs. Jones in every way, felt that $10,000, being one-sixth of the entire amount at their disposal, was too large a sum for one exhibit. Several of the members so expressed themselves to Mr. Thacher, adding that the executive committee felt that $5,000 was all it could afford as an appropriation from the Women's Board, and asking that the Board of General Managers should share the expense of the exhibit; this Mr. Thacher agreed should be done, saying, if $10,000 was needed, the second $5,000 should be furnished by his board.

It was at first intended that the exhibit should only occupy a showcase, filling one arch in the rotunda of the Government Building, but as it outgrew this space, it was divided into two parts — those objects which had distinct historical associations and value being shown in the

Government Building, while those dealing with the home life of the past were placed in a room set apart for them in the New York building, which was constantly crowded with visitors, who seemed chiefly attracted by the "Astor" piano, the old wheels for spinning wool and flax, a beautiful old Dutch sledge and the massive silver vases presented to Governor Clinton on the completion of the Erie canal, which were admitted as being of great local interest, although belonging to a somewhat later day. Showcases were filled with small objects, while on the walls were hung portraits and interesting old deeds and grants of property. In the Government Building was shown the complete camp service used by General Washington during the Revolution, also that of General Philip Schuyler and various interesting articles loaned by his descendants and by the Van Cortlandt family. A waistcoat embroidered by Marie Antoinette and given by Madame Campan to her brother, Citizen Genet, attracted much attention, as did the miniatures of Alexander Hamilton, Colonel William Duer and the only order and diploma of Cincinnati exhibited by any State.

As every article in the collection was prized by its owner far beyond its intrinsic value, the whole was heavily insured in the best companies, and the rate of insurance was so high that this was the largest item in the expenses of the committee, which were necessarily heavy. There were 230 articles exhibited, and everything in the Government Building and of historical interest was returned to its owner without the least injury, only two small articles having been lost in the New York State Building during the process of unpacking while the building was still in confusion. Fortunately Mrs. Jones was able to keep within the appropriation made by the Board of Women Managers, as the space assigned for the exhibit in the Government Building was very small.

### APPLIED ARTS COMMITTEE.

An exhibit of women's work in the applied arts was among the first to be considered by the State board. As Mrs. Candace Wheeler had for years been closely associated with this branch of industry, she was invited to become director of the exhibit. It was found impossible to make the collection without first establishing an office in New York city, as this was the center from which to direct or create interest in the exhibit. Through the kind aid of the late Mr. McNaughton, rooms were acquired at 1122 Broadway, where the First Judicial Commission had offices. Mrs. Wheeler at once asked for an appropriation of $2,500 for the expense of gathering together the exhibit, but the sum was exceeded as the collection was made with greater difficulty than was at first anticipated. The office at 1122 Broadway was necessarily retained until the 1st of May, 1893, but as it was used commonly by Mrs. Wheeler's and Mrs. Webb's committees, the office expenses were equally divided. Mrs. Wheeler was given the power to form as many sub-committees as she felt could aid her. She was sometimes unavoidably absent in Chicago for long periods, having received the appointment of color director of the Woman's Building, and at these times, Miss Margaret Tomes, secretary of the bureau, was frequently obliged to exercise her judgment in matters of importance. At the first of

the eight meetings held by Mrs. Wheeler the different lines of work were discussed, and the following committees formed: Committee on applied and decorative painting; committee on stained glass and glass mosaics; committee on modeling and plaster ornament; committee on woodcarving, picture frames, etc.; committee on ornamental leather, wall paper, etc.; committee on modern textiles and tapestries; committee on modern embroideries; committee on modern ecclesiastical embroideries; committee on designs for gold and silver work, gems, etc.; committee on art manufactures in iron, brass, etc.; committee on pottery, porcelains, etc.; committee on book binding, book covers, etc.; committee on modern handmade lace.

It was hoped that these committees would completely cover the work of women in the applied arts, and that the workers themselves would quickly respond to the circulars and other appeals sent all over the State, begging their interest in the exhibit. In September, 1892, Mrs. Wheeler found that if the exhibit was to be a credit, the choice specimens of work must be requested, perhaps personally sought after, treated as a loan, and the expenses of insurance and transportation paid by the board. The workers themselves found it impossible to send their contributions at their own risk and cost. Efforts made on these lines were productive of success although much hard work was entailed. Naturally the first general appeal brought to the bureau from the country districts, and even from New York, occasional articles which were of no artistic merit and others that were well enough for a local exhibition, but were not of sufficient importance to place in a collection for a great exposition. It was of course impossible to accept or reject proposed exhibits without having them placed before expert committees. Partly for the purpose of gathering together the articles in one place, so that they could be properly passed upon, and also in order to work up a stronger interest by giving local color to the plan for the exposition, the chairmen of the various committees met and decided to hold a preliminary exhibition in New York city. It was enthusiastically suggested that if the exhibition should prove successful it might result in the establishment of a regular exhibition and assist in the founding of a permanent bureau of applied arts. The "preliminary" was so planned that it very nearly paid its own expenses, being placed in the hands of the American Art Association, 6 East Twenty-third street, and, as above stated, it made it possible for the expert committees to inspect the articles with ease and make suitable selections for the exposition. The preliminary exhibition took place early in March. At its close 458 articles were chosen for Chicago, and were packed and forwarded in charge of Mrs. Wheeler. It was an important exhibit as showing the varied handicrafts of women. It was strong in certain lines, some of which were new departures in the field of women's work. The collection was shown in glass cases of such shape and dimensions as exhibited the articles to advantage. The greater part of it was assigned space in the northeast corner and on the ground floor of the Women's Building, but the space not being sufficient, the wall papers and book cover designs, etc., were displayed respectively in the educational department and the gallery. The work of the Asso-

ciated Artists, although planned at first for a separate exhibit, was finally included with the applied arts.

The following exhibitors received awards:

Mrs. Esther Carter, Mrs. Frederick Downer, Miss Sophie W. Downer, Mrs. S. H. Emerson, Clotilde Garborino, Meta S. Gibson, Mrs. Henry Hampton, Mrs. Jane Holdsworth, Mrs. Dora Wheeler Keith, J. & R. Lamb, Mrs. Rhoda Holmes Nicholls, Mrs. Leslie Pell-Clarke, Mrs. Mary Austin Peters, Julie Petit, Mrs. R. W. Preston, Miss N. C. Ryerson, Mrs. E. N. Vanderpool and Miss Pauline Van Kuyck.

### COMMITTEE ON MANUFACTURES AND INDUSTRIES.

The same difficulty to be met in all the committees — lack of sufficient time — retarded the work on manufactures and industries. The board having been formed in the summer, just as the members were about to leave town, it was difficult to undertake any consecutive plans. Miss Roosevelt, chairman, appointed a sub-committee, with Mrs. Gaspar Griswold, of New York city, at its head, but it was autumn before any practical work could be taken up. Inquiries about the women employees were then instituted at some of the factories, but there seemed so much reluctance on the part of the manufacturers to furnish any facts that this method was abandoned. The desire of the committee was to learn in what proportion women were employed in factories, and as far as possible to obtain details concerning their positions relative to men. An attempt was made to investigate the various industries pursued by women, many of which had been opened to them only during recent years. Miss Roosevelt wrote the superintendents of the census and bureau of statistics in Washington, and also James Connolly, Factory Inspector of New York State. She received the co-operation of all, and Mr. Connolly proposed the plan of compiling from his reports the statistics regarding women's work in factories. He said it would cost from $300 to $500 to prepare such a work, as the figures would have to be culled from his general reports, some of which had been published though some had not. The experience of an expert was desirable and he suggested that his own employees should do the work. This plan was acceded to, the only request from Miss Roosevelt being that women should be assigned the task. In giving the work into the hands of Mr. Connolly's experts, it was found unnecessary for Miss Roosevelt and her committee on manufactures and industries to instigate any further inquiries about factory women, and the work of this committee was virtually merged in the committee on statistics. The compilations made in the Factory Inspector's office were so tabulated that at a glance it could be found how many factories there were in the State in which women were employed, what was the percentage of women, etc. As an incidental matter, Mr. Connolly, at the request of Miss Roosevelt, asked some of the manufacturers to have their workrooms in which women were employed photographed. A certain number responded, and these photographs were placed on exhibition in the record room of the Woman's Building with the statistical charts.

EXHIBIT OF THE TRAINING-SCHOOLS FOR NURSES.

COMMITTEE ON STATISTICS.

Early in the work for the exposition, Mrs. Palmer caused a circular to be sent out asking for a full record of what women were doing in all industrial lines, and she desired the ladies of each State and Territory to prepare charts giving full information as to such work. A committee on statistics was one of the first to be formed by the New York State Board of Women Managers, and it was considered a wise plan to select a New York city woman as chairman. Miss Roosevelt was appointed, and accepted the position. Mrs. Palmer's expressed desire gave the work an impetus it could not otherwise have had, for gathering statistics is an almost thankless task. No matter how well such an exhibit might be planned, there could be no hope of completely covering the ground in the short space of time allowed, and even if incomparably well done the fact would still remain that the exhibit would only interest a small number of individuals. But Mrs. Palmer's object was a good one, and the New York board was desirous of co-operating with her. The county workers formed their committees on the lines marked out by the women managers, and in the course of time records began to come in from different parts of the State. This was pioneer work, and Miss Roosevelt makes no pretension to a complete record.

It is valuable, however, if for no other reason than its suggestiveness, showing the innumerable objects to which women turn for self-support. The question of the wage-earning power of men and women is beyond the scope of this report, but it would seem well to state what the investigations prove, that frequently the complaints made as to the higher wages given men are most unjust, as women are often the ones who cut down the wages for their whole sex. This is largely owing to the fact that many only wish to help support themselves while living at home, and constantly look forward to the probability of marriage.

Miss Roosevelt found a very able co-worker in Miss Florence Lockwood, and she was aided also by Miss Mary Gay Humphreys, a newspaper woman, who had given special attention to factory women, and Miss Margaret Finn, factory inspector. Miss Lockwood was made chairman of the New York city sub-committee, and more than a year was most exactingly demanded from the women in their task of collecting and preparing the statistics. It is interesting to state here that one of the men in Washington, whom Miss Roosevelt consulted as an authority in regard to her work, said that whatever her committee was able to print, so long as it was correct, would be most useful even where not absolutely full. Something of the nature and magnitude of the work of the committee on statistics will be seen by the following extracts from a report issued several months ago: "The data given has in every instance, except two (for the insane and criminal reports), been collected by volunteers and in all instances arranged by volunteers. When this fact is realized and it is also remembered that up to this time no attempt has been made to make a general and complete classification of the achievements and occupations of women, it will be under-

stood why the report is in some respects so imperfect and so inadequate in representing the women of the State.

"The women of New York State number 3,020,960 (total population 5,997,953), an eleventh of the whole female population of the Union. Owing partly to New York's being an old and thickly-settled State, containing the largest city in the republic, it has initiated and led many of the most important experiments and movements in which women have been engaged during the past fifty years.

"Among the professions, the progress of the study of medicine by women has been peculiarly noteworthy, the first medical diploma ever given to a woman being presented to Doctor Elizabeth Blackwell in Geneva, N. Y., in 1849; the first women's hospital in the world founded in 1857, in New York city, and the first medical society to admit women members opening its doors to them in 1867. The medical educational facilities for women, with the exception of hospital practice, are better in this State at this moment than in any other State or country in the world.

"The number of women journalists is also noteworthy, 2,401, among whom 321 rank as editors of daily, weekly and monthly publications.

"The philanthropic movements in which women have taken part and in most of which they have co-operated with men, have not only been earnest and benevolent but wise and enlightened, and the conditions of important social problems have in many instances been radically changed and bettered by their action. A number of individual women, among whose names that of the great reformer Dorothea Dix may be mentioned, have done valuable and important work in relation to the State care of the insane, the pauper and the criminal population, notably in the case of the State Charities Aid Association, which in conjunction with men, but founded by a woman, has, since its birth in 1872, made many important legislative reforms.

"The Working Girls' Club Association, the Training School for Nurses, the Kitchen Garden system of education, the Day Nursery, the Consumers' League, were all of them first started in this State by women.

"Its age and size, however, have also formed a strong conservative element in the State and kept practically closed many professions and checked many movements which the younger and less-fettered Western States have forwarded. For instance, the practice of law by women is practically a dead letter in New York, although the bar is nominally open to women and the legal educational facilities good; and in all questions concerning the political rights and duties of women New York holds a very conservative position, and as yet has not extended any of the privileges of the franchise (except voting for school boards) to women. The first woman member of the State Board of Charities was appointed in 1877 in New York city. In collegiate, academic and common-school education New York stands next to Massachusetts, and in special professional, technical and industrial education leads the Union Mention has already been made of the special facilities offered to physicians, and the list of valuable technical schools and institutions is a long one.

EXHIBIT OF THE TRAINING-SCHOOLS FOR NURSES.

"The work in designing by the pupils of the Cooper Union Art School, the Art Student's League and the Academy of Design has been a valuable contribution to the artistic development of the nation. In presenting the report on the female criminals, the statistics being official, an effort has been made to rank New York, and it has been found that she occupies a sad pre-eminence, her total female population forming one-eleventh of the Union, and her female criminal population one-third. This is partly accounted for by the fact that New York city receives annually a large influx of low foreign emigrants.

"In presenting the list of gifts and bequests, the first recorded gift by a woman was a silver communion service, given by Queen Anne to St. Peter's Church, Albany, in 1715."

This report and accompanying records were printed in pamphlet form and had a limited distribution during the exposition.

As Mrs. Palmer had requested that the statistics should be put into such a shape that comparison could be made with those of other countries and States, Miss Roosevelt decided to have those of New York tabulated with all the items clearly shown. Pages of paper twenty-two by twenty-eight were used for the statements and mounted and interspersed alternately with the photographs of the interiors of factories where women were at work. The standard was assigned space in the north record room adjoining the library in the Woman's Building, and has since the close of the exposition been transferred to the State Library in the Capitol at Albany.

### DOLL EXHIBIT.

The display of fashion plates at the Paris Exposition having suggested to Mrs. Halsey the possibility of having a similar exhibit at the Columbian Exposition, she was requested to take charge of the arrangements. Mrs. Dodge proposed adding costumed dolls representing the different periods in American history, and the idea meeting with favor, Mrs. Dodge was asked to take the matter in charge. After much correspondence regarding the fashion plates, Mrs. Halsey reported that a large exhibit of them was to be sent from Paris so that any she had found it possible to collect would be incomplete and inferior. It was then decided to give up that part of the exhibit.

The scheme of the costumed dolls was carried out with great success, sixteen being dressed by New York dressmakers, under the supervision of well-known society girls. Space in the Woman's Building was first assigned the case containing the dolls on one of the landings leading to the second floor, but it was afterwards removed to a place on the ground floor near the north entrance. Here it attracted much attention, at some parts of the day being surrounded by a crowd of women and children. Since the close of the exposition the dolls have been sold for a sum which nearly equals the amount paid by the State for the exhibit.

### COMMITTEE ON MUSIC.

It was not until the meeting of the executive committee, held September 6, 1892, that the subject of a committee on music was discussed.

It was known that the National board had such a committee, and as the State board had endeavored to follow the lines marked out by the lady managers, it seemed advisable to establish a committee on music. Before the meeting Mr. Thacher requested that the women's board should not confine itself to statistics about women in music, but should obtain all the data possible about musical societies and organizations, without regard to the sex of members. Miss Roosevelt was appointed chairman of the committee. She said it would not be possible for her to undertake the work as she was already chairman of two committees, but she would endeavor to form a sub-committee. Miss Charlotte Arnold, whose love and knowledge of music eminently fitted her for the work, kindly consented to accept the chairmanship, and, with the consent of the board, formed an advisory committee of men. Miss Arnold gave her entire time to the work as her task demanded. The following interesting extract is made from Miss Arnold's report:

"The attempt of your committee has been to record the work of musical societies and organizations, vocal, instrumental, educational and in churches, giving also the names of resident musicians throughout the State, and a chronological list of the performances of opera in New York city, and of distinguished foreign artists, whose visits have done much to raise our standards and attest our appreciation of the best examples of the art.

"Although musical knowledge was very crude and limited in America two hundred years ago, the desire for music existed strongly among the Dutch and English settlers on Manhattan Island, and its gratification and growth were not impeded by puritanical prejudice. The tradition of concert gardens goes back to the early days of the settlement, when there was one at Corlear's Hook, whose name was derived from Van Corlear, the principal trumpeter of the fort at New Amsterdam. Castle Clinton was ceded to the city, and became Castle Garden in response to the demand for a promenade with music for the use of the public. During the seventeenth century choirmasters came from England, singing societies for rendering church music were formed, and in 1690 music was first printed in the colonies. In 1753, William Tuckey, a schoolmaster of New York, taught singing to the children of his district. In 1766 he was paid by the trustees of Trinity for performing the music at the opening of St. Paul's Chapel. He conducted the first performance of the overture and sixteen other numbers of the 'Messiah' in Trinity Church, in October, 1770. Oratorio performances were given at St. Paul's and Vauxhall Garden, and orchestras were gradually formed, though many instruments were wanting until operatic performances were regularly given.

"From these beginnings, imperfectly suggested, have developed the musical conditions of to-day, which are only partly represented by the accompanying report.

"In regard to amateur work, it should perhaps be said the principal societies of the city have been founded by amateurs. Amateur associations have always existed, and of late years so many have been formed that it is not possible to enumerate them. They are most varied as to numbers and scope of work, continually disbanding and

reforming, and generally unknown beyond a small circle. A madrigal club, a ladies' morning class (vocal), a ladies' orchestra (24 members), which existed four or five years during the last decade (these now extinct), a choral club (60 to 90 members), which was started 20 years ago, a string quartette (men), which has existed as long, and a music club (150 members), recently organized, are among the best known. Amateur operas, more often burlesques, are frequently given.

"Eleven hundred and sixty churches in the State employ choirs. All the counties have not been heard from, nor has the information received always been sufficiently definite.

"It has not been possible to obtain a satisfactory list of musicians. Over 500, however, are reported. Since composition is a part of every student's education, the fact of publishing songs and small pieces does not entitle the writer to be called a composer."

### COMMITTEE ON THE LOAN EXHIBIT OF LACES.

*Fans, Miniatures and Antique Embroideries.* In one of the early interviews that Mrs. Palmer had with some of the members of the board she called attention to the fact that many New York ladies possessed rare laces, etc., from which a fine collection ought to be made for exhibition. The executive committee took the matter up and at one of its early meetings appointed Mrs. Corning chairman of a committee to make a collection of laces, fans, miniatures and antique embroideries, the chairman to have the power to choose the members of her committee. Mrs. Corning declined, and Miss Love and Mrs. Wadsworth, being offered the chairmanship successively, begged to be excused also as they were burdened with other work. The position was accepted by Mrs. Burton N. Harrison, of New York, who appointed her own committee. Mrs. Harrison and her committee began their work vigorously and obtained the assurance from a number of individuals of some fine loans if a guaranty could be had that a heavy insurance should cover their possible loss. The subject of the insurance was a continual thorn in the flesh of those who had charge of the loan exhibit. Mrs. Harrison considered that a policy of not less than $500,000 should be taken out, and when the matter was referred to the Board of General Managers Mr. Thacher said that the exposition authorities were responsible the moment the exhibit entered the exposition grounds, and, therefore, the guaranty must be issued by them. Application was at once made to Mrs. Palmer to secure it. In course of time a promise was given that the collection would be heavily insured, but the request was made that the articles should be itemized as to their value. The difficulties in the way of obtaining this minute information was very great. Meanwhile, Mrs. Harrison had resigned her chairmanship to go to Europe, Mrs. William Greenough consenting to take her place. There was to be an insurance taken out by the Board of Women Managers on the collection during the few days that the articles were being gathered together to be packed and during transportation. The anxiety pertaining to this work Mrs. Greenough felt too great for any one outside of the board, and although she offered to do everything in her

power, she asked that one of the members of the board should act as the responsible head. The matter again came before the executive committee, and it was decided that Mrs. Sage, as chairman, should assume the direct responsibility, but as there must be others for the active work, Mrs. Webb undertook the collection of fans; Mrs. Dodge of embroideries, miniatures, watches and boxes; Miss Newbold still held her position as chairman of the original committee of laces. A guaranty was obtained from President Higinbotham of the exposition company to pay $200,000 in case of fire or accident to the collection, it being too late for him to obtain a policy from any insurance company for such an amount. The actual value of the collection was afterwards found to be $93,000, and the responsibility for the amount was transferred from President Higinbotham to the Board of Lady Managers whose committee on insurance succeeded in taking out policies with a number of different companies. At last the collection was transported to Chicago, where Mrs. Dodge, Miss Newbold and Mr. E. Hamilton Bell and the members of the installation committee devoted themselves to putting it in the showcases made for the purpose. The collection occupied the middle portion of the west gallery of the Woman's Building, and it was removed at the close of the exposition and returned to the owners without loss or accident. The sum of $2,500 was set aside November 15, 1892, to cover the first expenses of the loan and colonial exhibits. Later a round sum was appropriated for the colonial exhibit and the $2,500 was devoted to the loan, an amount not sufficient to cover all the expenses, but the deficiency was made up as required.

### COMMITTEE ON FINE ARTS.

This committee was one suggested by the Board of General Managers and began its existence at the first meeting of the Board of Women Managers as one of its standing committees. At first there seemed nothing for the women to do, as there was a large committee of artists at work in the State already, but in the course of a few months Mrs. Palmer called upon New York to send twelve pictures to be exhibited in the gallery of honor in the Woman's Building and it was requested that these should be recommended by the committee on fine arts as of superior merit. The art committee set to work at once to carry out this request.

Mrs. Sage was first appointed chairman but declined as she already had all the work she could undertake. Mrs. Stranahan was next appointed and declined for the same reason. Finally Mrs. Pell-Clarke consented to fill the place, although feeling herself unfitted for the position. In November Mrs. Pell-Clarke went south for the winter and Mrs. Halsey was asked to be chairman during her absence. It was while the latter occupied the chair that she, with the assistance of Mrs. Stranahan, formed an advisory committee of women artists for the purpose of making the selection of pictures for the Woman's Building. Mrs. Rhoda Holmes Nicholls was made chairman of this advisory committee and Miss Annie B. Shepley secretary. The other members were Mrs. Dora Wheeler Keith, Mrs. Marie Guise Newcomb, Miss Maria Brooks, Miss Clara McChesney, Mrs. Rosina Emmet Sherwood, Miss

SECTION OF THE EXHIBIT OF APPLIED ARTS.

Caroline Hecker and Mrs. Kenyon Cox. The committee found that the best work by women artists in New York had already been contributed to the regular fine art department of the exposition. A collection of pictures was made, however, at Budworth & Sons, on Fourteenth street, New York, and the committee acting as jurors selected twelve. These, which in justice to the painters it should be stated were not up to their highest standards, except, perhaps, in the case of Miss Brooks and the busts of Lincoln and Grant by Mrs. Sarah F. Ames, were sent to Chicago at the expense of the board. The bust of Mrs. Stowe, and the portrait of Pocahontas were acquired for the library by members of the fine art committee, Mrs. Sage securing the former through the sculptor, Miss Annie Whitney, and Mrs. Pell-Clarke obtaining the latter from Mrs. Palmer, it having been sent to the exposition from England by Mr. Wellcome. Through some unaccountable oversight the portrait of Pocahontas remained in its box for half the summer, and it was through Mrs. Pell-Clarke's intervention that its whereabouts were discovered. The chairman had it placed at once in the library. She also undertook the reshipment of the picture at the close of the exposition to its owner, Mr. Wellcome.

The national committee of New York artists appointed by Mr. Halsey C. Ives disclaimed the charge of having been hostile to women artists in making their choice of pictures for the Fine Art Building, but many complaints were forced upon the committee on fine arts of the Board of Women Managers, and there were various requests received to have pictures reconsidered. The women did not find it within their power to accede to such requests. Considerable trouble was taken to gather statistics about women artists, and it was learned that several hundred women, natives and residents of the State, were following art as a profession. The subject of the appointment of women jurors in the national advisory committee was brought before the executive committee, and, therefore, appears in the report of that committee.

Acting upon a suggestion made by Mrs. Halsey, Mr. Bierstadt was asked to loan his picture of the "Landing of Columbus" for exhibition in the New York State Building. On granting the request of the women Mr. Bierstadt offered the companion picture, "The Yosemite." Although space for these pictures was promised, much to the regret of the committee the place was not found for them. The architects of the building requested that no pictures should hang on the walls, as rich draperies and paper had been especially designed for them. Mr. Bierstadt's pictures required a strong light and peculiar color surroundings, and although the architects were obliged to yield to the judgment of others before the summer was over, a few pictures finding place in the large rooms on the entrance floor, the committee felt that Mr. Bierstadt's pictures would not have been seen to advantage on any of the wall spaces available.

## KNITTING MILLS EXHIBIT.

Mrs. Palmer's appeal to the industrial women of the country to take part in the exposition, brought a letter to her from Miss Ellen Conlon, a worker in one of the knitting mills of Amsterdam. She expressed

herself in enthusiastic terms of appreciation and offered to do what she could to interest other factory women in the women's department. Mrs. Palmer referred the letter to the State board and Mrs. Ives was authorized to follow up the matter. When Miss Conlon was seen, she suggested that the women in the knitting mills should make a united exhibit. She advised that an invitation to take part should be extended to the women in the factories at Amsterdam, Cohoes and Little Falls, and volunteered to bring the matter before the workers in Amsterdam. It was necessary to obtain the co-operation of the manufacturers, and Mrs. Ives visited all three of the towns for this purpose. The principal millowners promised their aid, and later gave permission to their employees to make special garments for exhibition. A showcase was provided by the Board of Women Managers, almost the only expense the exhibit occasioned, and about two dozen articles were shown. The display was made in a corner of the room in which the Afro-American showcases were placed. It was the least artistic of all the exhibits, but there was satisfaction to the board in having undertaken it, if for no other reason than that the women represented were exceedingly gratified.

### COMMITTEE ON THE INSTALLATION AND CLOSING OF EXHIBITS.

As the work of the women's board progressed toward the final collection of exhibits in Chicago, the fact became apparent that a committee would be needed to see that articles were properly installed at the beginning, and repacked and sent to their owners at the close of the exposition. At an executive meeting, held on the 15th of March, 1893, Mrs. Wadsworth was proposed as chairman of an installation committee. She at first declined the chairmanship, but finally accepted at the urgent request of the executive committee. The three members of the installation committee were each allowed their expenses for eight weeks in Chicago, to attend to their duties. Mrs. Wadsworth had the power to send for the members whenever she deemed it expedient, and also to call the chairmen of committees having special exhibits, as they had responsibilities that others could not always assume. Mrs. Wadsworth and the other members of the installation committee met in Chicago soon after the middle of April, and the work was at once systematized as fully as possible; but all exposition work was behindhand, and it was soon found that even with the most herculean efforts it would be impossible to install the exhibits by the first of May. Many matters of business connected with the work which had heretofore been brought before the executive committee were necessarily decided in Chicago, and for this reason frequent meetings of the installation committee were held. Deskroom was given the committee in the Woman's Building, that being the most convenient place for headquarters, and at the first meeting of the committee Miss Tomes was made secretary.

Details connected with the Afro-American exhibit, the sale of the books in the Woman's Building, the assignment of space for a portion of the colonial exhibit in the State building, and the matter of the insurance on the loan collection, all required and received the attention of the installation committee. The exhibit of the bureau of applied

arts, and of the Decorative Art Society, and some individual exhibits from the State, were installed under the personal direction of Miss Tomes.

There were delays in the delivery of showcases, and the boxes of exhibits were slow in arriving. It was necessary constantly to coerce the workmen, and the bad weather, with all the other disadvantages, had a most depressing effect upon every one concerned, but although good results were very difficult to obtain for the hard work expended, the board was justly proud when the exhibits were finally placed. Mrs. Wadsworth was not able to leave Chicago until June eighth. She then consigned to Miss Tomes the care of the New York State exhibits in the Woman's Building. The listing and entering for award of a large number of them which had not previously been entered, and other duties besides the correspondence entailed by her work, left Miss Tomes little time for the sale of the "Distaff Series," which was also intrusted to her. Miss Jennyss was, therefore, spared from some of her office duties and devoted a portion of each day to the sale of the books after the middle of August. A regular routine was followed during the summer. The last of August Mrs. Wadsworth went to Chicago, and giving a week to the matter made such arrangements as were possible at that early date for packing and returning the exhibits at the close of the exposition. Such details as she could not enter into at the time she left in the hands of Miss Tomes. It was by this thoughtful planning of the work before the exposition officials were overburdened, that the fine record of having every exhibit packed and out of the grounds by November sixth was made. Mrs. Wadsworth called her committee to Chicago October twenty-fourth, and by employing a shipping agent who engaged a team to bring the empty boxes to the Woman's Building early on the morning of November first, and by having the packers to begin the work at once everything moved as if by magic. The library furniture was sent to New York by freight, but the boxes of exhibits were all forwarded by express, it being considered wiser to incur the extra expense rather than drag out the work. It was necessary to have some of the collective exhibits sent to a place of safety in New York and to retain Miss Tomes to make the distribution to the individual owners. Miss Tomes returned to New York November thirteenth, established her business headquarters at Miss Roosevelt's house, by the latter's kind request, and until December sixth gave her time to managing the return of the exhibits and to correspondence with the exhibitors. The articles themselves had been sent to Budworth's, which firm had successfully packed them in the spring, and the distribution was made from there. Miss Tomes not having completed her reports and correspondence at the above date, she removed her desk to her home in Washington, where she was occupied until December fifteenth. With the exception of the loss by theft of the gold chain, brooch and ear-rings from the Afro-American collection (mention of which has been made in the report of Miss Howard's work) and two brass articles from the applied arts exhibit, which had never been under the care of the installation committee, having been mislaid by those in charge of the preliminary exhibition in New York city

during the illness of Miss Tomes, the articles were all returned. A blank receipt was issued to each exhibitor, to be signed if received in good order, and it is gratifying to report that the secretary of the installation committee has received them all duly signed.

Considering the fact that there were a dozen State exhibits in the Woman's Building, besides several exhibits in other buildings, and that these consisted of hundreds of articles, this is regarded as an admirable record. No appropriation was made for the expenses of the installation committee, as there was no possible means of knowing what these would be.

Every effort was made to sell the showcases and other articles that had been paid for by the State and upon which it was hoped there might be a rebate. At the suggestion of Mrs. Wadsworth, Miss Tomes applied early to dealers in showcases hoping that a satisfactory arrangement might be made, but the only bargain possible, excepting in a few instances, where good cases were sold outright, was for the sale of the plate glass. At the last the wrecking company were appealed to, but the market was so flooded that absolutely no bid was obtained for the showcases without glass. The furniture in the State building which the board had paid for was purchased by the members of the board and a few outsiders who were willing to pay small sums for these souvenirs. The articles so bought were removed at the expense of the purchasers. The installation committee well considered this plan before they carried it into operation, deciding it was preferable to so dispose of the effects which were of no great value as second-hand wares, rather than have the expense of transporting them to New York State.

The exhibits in the Children's and Government buildings were in charge of the chairman of those exhibits as they required special supervision. Mrs. Dodge's effects were nearly all packed by her matron, Miss Hall, Miss Patterson attending to their removal. The care of having the crèche belongings packed and removed was placed by Miss Love in the hands of Miss Patterson, who was to remain in Chicago until the exposition closed. She was made a temporary member of the installation committee to benefit by the experience of the others, but her work was not in any way connected with theirs, and she was felt to have accomplished a most arduous task when she announced at the last meeting that every article belonging to both exhibits had been returned.

SECTION OF THE EXHIBIT OF APPLIED ARTS.

## EXPENDITURES.

| | | | Rebate. |
|---|---|---|---|
| Day Nursery exhibit | $2,662 40 | | |
| Fitch Crèche exhibit | 2,139 60 | | |
| | | $4.802 00 | $172 55 |
| Cooking School exhibit | | 1.832 39 | |
| Autographs exhibit | | 322 94 | |
| Trained Nurses exhibit | | 700 17 | 17 00 |
| Knitting Mills exhibit | | 184 82 | 15 00 |
| Decoration of the library | | 5.443 57 | 916 00 |
| Statistics exhibit | | 1 652 31 | |
| Manufactures and Industries exhibit | | 515 23 | |
| Applied Arts exhibit | | 3,591 09 | 38 09 |
| Literary exhibit | | 2,906 28 | |
| Afro-American exhibit | | 574 93 | |
| Loan exhibit | | 3,629 17 | 40 25 |
| Colonial exhibit | | 4,611 31 | 55 14 |
| Kitchen Garden exhibit | | 2,402 01 | 5 00 |
| Doll exhibit | | 365 53 | 305 00 |
| Educational exhibit | | 328 52 | 47 50 |
| Fine Arts exhibit | | 261 15 | |
| New York local committee expenses | | 1,398 29 | |
| New York State Building exhibit | | 2,227 71 | |
| Installation and closing | | 3,483 09 | |
| Salaries, traveling expenses and sundries (to be augmented). | | 11,587 55 | 595 32 |
| Report (to be augmented) | | 34 50 | |
| Children's building appropriation | | 2,000 00 | |
| By Mrs. Corning | | ..... | 35 00 |
| | | $54.854 56 | $2,241 85 |

# CATALOGUE OF NEW YORK EXHIBITS IN THE WOMAN'S BUILDING.

## PAINTINGS AND SCULPTURE.

A'Becket, Miss Marie, New York.— The Storm.

Coman, Mrs. C. B. Waterville.— Thistledown.

Brooks, Miss Maria, New York.— Down Piccadilly.

Emmet, Miss Lydia, New York.— Portrait study, a Pastel.

Haynes, C. Coventry, New York.— Portrait.

Hart, Miss Letitia B., New York.— A New Book.

Keith, Mrs. Dora Wheeler, New York.— Daphne's Nymphs.

Nicholls, Mrs. Rhoda Holmes, New York.— A Venetian Courtyard.

Scott, Mrs. E. M. New York.— Cherries.

Shepley, Miss Annie B., New York.— Work and Play.

Stone, Ellen J., New York.— Portrait.

Vanderpool, Mrs. Emily K., New York.— Spirit of the XIX Century.

Ames, Mrs. Sarah F., New York.— Busts of Lincoln and Grant.

## APPLIED ARTS EXHIBIT.

Armstrong, Helen M.— Sketch for decorative panel; cartoon for decorative panel; thirteen reproductions of calendar designs; cartoon "The Annunciation" for stained glass; two cards of illustrations; one stained glass window, subject St. Paul; one sketch and cartoon for same; one glass panel.

Armstrong, Margaret M.— Thirteen cards of book covers; six designs for book covers; two cards of initial letters.

Aspinwall, Miss M. A.— Six designs for wall paper and silks.

Aspinwall, Miss Eliza.— Six designs for wall paper and silks.

Atwater, Edith.— Design for silver vase.

Baxter, Miss Sara.— Silver decoration "Order of Columbus."

Bessey, Miss M. D.— Photograph of badge of national board of lady managers; photograph of badge of New York State board of women managers.

Blashfield, Mrs. E. W.— Narcissus design for mirror.

Carter, Mrs. Esther.— Flemish lace curtain (white); Marie Antoinette sash curtain; Marie Antoinette bow knots (wreaths); Marie Antoinette basket design; Renaissance lace on net, sash curtain; Renaissance lace door curtain (white); Venetian lace tea cloth; Venetian lace doilies, two; Flemish lace doily; Venetian trimmings for scarf.

Century Co.— "The Journey" by Laura C. Hills; "House Cleaning" by Mary Hallock Foote; "The Butterfly Hunter" by L. C. Hills; "The May Song" by L. C. Hills; "Up Spake the Elfin Queen" by Albertine R. Wheelan; "The Boy's Cartoon" by Alice Barber Stephens; "Kittens at School" by Albertine R. Wheelan; "Little Knitter" by Maria O. Noble; "Aunt Tabitha" by Maria O. Noble; "Old Lady of Antwerp" by Maria O. Noble; "Bringing Water from the Spring" by Rose M. Sprague; "Archibald Stone's Mistake" by Rose M. Sprague; "Cherries are so Unwholesome" by Rose M. Sprague; "Ali Top was Proud" by Albertine R. Wheelan; "Chief Bread Baker to the King" by Valentine Adams; "Going to the Fair" by Jessie McDermott Walcott; "Under the Wonderful Blue Sky" by Jessie McDermott Walcott; "The Letter of Resignation" by M. H. Foote; "Making the Patchwork" by M. H. Foote; "'Eat Your Supper,' said the Nurse" by M. H. Foote; "Bertha's Debut" by Rose M. Sprague; "Ali Top's Heart Grew Sad" by A. R. Wheelan; "I'll Simply Wheel Myself Around" by A. R. Wheelan; "The Idol" by A. R. Wheelan; "Will O' the Wisp" by A. R. Wheelan; "Greek Herd-boy" by A. R. Wheelan.

Cox, Mrs. Kenyon.— Suggestion for transom; suggestion for reredos; suggestion for stained glass.

Crownfield, S. L.— Design for wall paper (wild azaleas).

Curtis, May L.— China pitcher for lemonade. (Study of lemons and blossoms.)

Colgate.— Three fans, painted.

Day, Mrs. Henry.— Table cloth, Persian design, yellow; table cloth, Oriental design, yellow.

Downer, Mrs. Frederick.— Hand-made lace scarf, long and fine.

Downer, Miss Sophie W.— Linen table cloth spun in 1892, with specimen of flax used.

Drivdahl, Miss Marie.— Gold embroidered white satin cushion.

Dwight, Miss Minnie.— China, eleven pieces.

SECTION OF THE EXHIBIT OF APPLIED ARTS.

Eggleston, Allegra.— Study from Spanish girl; portrait sketch of man with mandolin; two portrait sketches, laughing children; portrait of Washington; portrait of Martha Custis; Columbus house in Genoa; proof of above; streets in which Columbus lived; proof of above; figure illustration from life of Columbus; proof of above.

Emerson, Mrs S. H.— Normandy copper jug; brass jar with cover.

Emmet, Lydia F.— Ten pictures, illustrations, etc.; design for seal New York board of women managers; two unframed designs.

Fry.— China jardiniere and tray and six plates.

Ferguson, E. Adele.— Two gold hairpin designs; two gold watch case designs; three silver opera glass holder designs; two silver six-inch handle designs for paper cutters.

Foote, Catherine.— Embroidered "Mermaid."

Frost, Helen.— Rose and chrysanthemum center piece, embroidered in white.

Geeson, Jean B.— Carved portfolio.

Garborino, Clotilde.— Fish platter and twelve plates; six game plates.

Gilchrist, Mrs. George.— Dinner set (sixteen pieces), embroidered (made for Mme. Patti).

Gibson, S. Meta. — Table cover; portiere; chair seat and back; tea cloth.

Hall, Miss Frances P.—Tray dandelions; tray daisies; pitcher, blue underglaze; rose jar with cover; bonbonniere with cover.

Hampton, Mrs. Henry — Linen center piece, honeysuckles; linen center piece, fleur-de-lis; linen center piece, yellow roses.

Hasbrouck, Mary K.— Specimens of stamped leather.

Hogan, Kate.— Piece braid lace, four inches wide; piece braid lace, seven inches wide.

Howell, C. E.— Wall paper.

Huntingtin, Metelill.— Hammered brass mirror frame.

Huger, Miss K. M.— One water color "Autumn"; design for fire place; panel designs for cupids; fan design cupids; two water colors of tulips.

Humphrey, Maud.— Design for wall paper and frieze.

Higginson, Mrs. Geo.— Embroidered altar piece "When Morning Stars Sang Together."

Holdsworth, Mrs. Jane — One table cover; two center pieces.

Joyce, Lillian V.— Two frames of designs for watch cases, match boxes, etc.

Keith, Dora Wheeler.— Design for ceiling; four illustrations, framed.

Lamb, Mrs. Ella Condie.— Design for Christmas cover Harper's Young People; design for cover "Childhood;" design for fire place, Mosaic Hospitality; design for decorative panel, history; design for Te Deum window; design for window, Madonna and angels; cartoon for window, Madonna and angels; cartoon for Baker Memorial.

Lamb, J. and R.— Frame with ecclesiastical embroidery (embroidered by Mary D. Stephens and Aimee Lee Hudson); frame embroidered angel by Mary D. Stephens.

Marshall, Miss Lilly.— Eighteen pieces of brass work.

Monachesi, Mme. Nicola R.— Plate, conventional design; bonbon dish with cover conventional design, green.

Morse, Miss Alice.— Four card book covers, Harper Bros.; two card book covers, Scribner's; four card book covers, G. P. Putnam's Sons; book cover, Century Co.

Nicholls, Rhoda Holmes,— Eight illustrations, bathers, Venetian boats, rocks East Gloucester, girl sewing, study in sunlight, mending nets, Venetian water gate; water color "On the Beach"; piece of hand-made point lace.

Osgood, Mrs. Worth.— Large vase with handle; standard for above.

Peters, Mrs. Mary Austin.— Shore piece embroidered on satin; landscape embroidered on satin.

Petit, Julie.— Quilt and shams.

Prescott, Katherine. — Ideal Italio, Faust and Marguerite.

Preston, Mrs. R. W.— Crochet counterpane (brown thread); pillow covers.

Parrish, Grace.— One brass frame.

Pyle, Katherine.— Illustration "Not an Apple Left;" three pages "Clever Peter."

Raymond, E. Launitz.— Twelve fish plates, raised gold work; case for above; box and cover, violet design; plate, pansy design; leaf plate; dish, forget-me-nots; biscuit jar, pansy design, with top.

Pell-Clarke, Mrs. Leslie.— Altar piece; "When Morning Stars Sang Together."

Redmond, Frieda V.— Decorated panel, roses; samples of printed silks.

Ryerson, Miss N. C.— Tapestry "Summer;" tapestry, Florentine; tapestry, two knights tilting; tapestry, portiere, seventeenth century; tapestry, portiere, sixteenth century.

Satterlee, Miss Florence.— Copy of Fra Angelico's Angels, embroidered picture.

Schroeder, Miss Emma.— Lace doily.

Scott, Mrs. E. M.— Reproduction of roses; reproduction of petunias; original water-color, pinks; original water-color, morning glories.

Sheldon, M. A.— One card; seven book covers.

Sherwood, Rosina Emmet.— Sixteen frames, water colors, pastels, etc., reproductions, illustrations, etc.

Sprague, Mrs. Harriet E.— Tete-a-tete, Dresden china; tray; sugar bowl; cream pitcher; teapot; four cups and four saucers.

Stimers, Miss Julia.— One frame, specimens of lithography.

Stephens, Alice Barber.— "Michael Angelo," black and white; "In the Meeting House."

T. M. C.—Two landscapes, embroidered.

Tieman, Miss Elsie C.— Carved stand for flower-pots.

Tillinghast.— One design for glass window.

Tiffany Glass and Decorating Co.— Portiere, silk velours; study, "magnolias;" study, "snowballs;" study, "water lillies;" study, "grapes;" three cartoons for glass; two cartoons adoring angels; twenty sketches for glass windows; three sketches by Agnes Northrup; seven sketches by Grace deLuze; seven sketches by Mrs. J. B. Weston; one sketch by Mary E. McDowell; one sketch by Lydia F. Emmet; one sketch by Mrs. W. P. Parish; three stations of the cross; two heads designed by L. F. Emmet; three glass lights magnolias, grapes and chrysanthemums; one glass light, women's glass cutting (thirty-nine pieces in all).

Troy Women's Exchange.— Three squares, Mexican drawn work; twelve doilies.

Upham, Miss.— Carved bellows.

Vanderpoel, Mrs. E. N.— Carved box.

Van Kuyck, Miss Pauline.— Photograph frame, repousse work.

Van Rensselaer, Mrs. J. K.— Book cover, Girl's Life, eighty years old.

Walker, Miss M.— Illustrations old English rhyme.

Wells, Miss Annie.— Embroidered picture Mater Dolorosa (property of St. Andrew's church).

Wilmarth, C. B.— Lemonade pitcher and tray.

Stokes, Caroline Phelps.— Two etchings; two pieces lace.

Gilliland.— Nine frames (two illustrations).

Milhau, Zella.— One card (two illustrations).

Ferguson.—Six illustrations (one frame).

Walker, J. A.— Two unframed water colors.

## COLONIAL LOAN EXHIBIT.

Most of these exhibits were installed in the Government Building; the remainder in the New York State Building.

License of Peter Hawes to practice law from Mayor Varick. Lent by Gilbert R. Hawes.

Cane used by Washington. Lent by Miss Jane Mead Welch.

Miniature of Robert Seton, an old New York merchant; snuff box of Robert Seton; seal of Robert Seton. Lent by Monsignor Seton.

Table cloth. Lent by Howland Pell.

Silver tankard; silver sugar bowl; plate; pair of buckles; silver tankard; book; pair of buckles. Lent by Augustus Van Cortlandt.

Fish knife used by George Washington; needle-book made by Mrs. Washington; ledger used by Laurence Washiugton in settling Washington's estate. Lent by J. P. Bradley.

Engraved powder horn used during Revolution. Lent by Mr. G. W. Van Siclen.

Sampler; five teaspoons. Lent by Mrs. J. L. Barney.

Soldier's discharge, signed by Washington; negro bill of sale. Lent by Dr. Albert Leffingwell.

Snuff box used by Washington. Lent by Hon. Roger A. Pryor.

Miniature of Hamilton, by Peale. Lent by C. W. Bowen.

Miniature of Col. Duer. Lent by Mrs. J. G. K. Duer.

Souvenir handkerchief. Lent by Mrs. I. M. Cooke.

Snuff box made from wood of prison ship "Jersey." Lent by Mrs. Douglas Robinson.

Portrait of Gov. George Clinton, by Ames. Lent by Alex. M. White.

Colonial embroidery. Lent by Miss S. C. Hewitt.

Pair of brown jean stays. Lent by Mrs. Magonigle.

Silver cake basket belonging to Gen. Schuyler. Lent by Miss Georgiana Schuyler.

New York almanack, 1770; colonial doll; freedom suit; piece of wedding dress; boxwood ruler. Lent by Mrs. G. H. Van Wagner.

Directory of 1786. Lent by T. J. Hallowell.

Pass signed by Washington; general order of Washington. Lent by Mr. Andrew Kraus.

Plan of New York in 1728. Lent by Mrs. C. A. Post.

Miniature of Surgeon-Gen. Burnet. Lent by Mrs. John Shaw.

Coffee pot owned by President Monroe; milk pitcher owned by President Monroe; miniature of President Monroe. Lent by Mrs. Gouverneur.

Pair of traveling pistols used by Gov. Morris. Lent by Mrs. Gouverneur Morris.

Silver basket, in use since 1740; chair; silver salver. Lent by Mrs. A. Verplanck Clapp.

Old Dutch Silver beaker of 1685. Lent by Mrs. J. L. Sanders.

Miniature of Gov. and Mrs. Clinton; pewter plate from Franklin House. Lent by Mr. De Witt Clinton Jones.

Washington's complete camp service of pewter. Lent by Hon. A. S. Hewitt.

Silver teapot; silver sugar bowl; silver pitcher; belonged to Gen. Horatio Gates. Lent by Mrs. T. Newbold.

View of New York harbor in 1750. Lent by Rev. C. F. Hoffman, D. D.

Colonial silver ladle; colonial coin; pewter plate belonged to Washington. Lent by A. W. Drake.

Brass warming pan. Lent by Mrs. T. J. Thompson.

Gold watch, given by Chief Justice Jay to Miss Livingston. Lent by Mrs. W. A. Walker.

Silver bowl with wooden handles, property of Gen. Schuyler; seal of Gen. Schuyler; seal of Gen. Hamilton; bill for fishing tackle, Gen. Schuyler's; camp service of Gen. Schuyler. Lent by Philip Schuyler.

Bayard punch bowl; old Flemish lace; three silver medals, Holland (commemorating American independence); Bayard deed of property, 1656. Lent by Gen. James Grant Wilson.

Abigail Adams' dress and stays. Lent by Mrs. J. J. Monell.

Silver chocolate pot; pair of green glass spectacles. Lent by Gerrit Yates Lansing, Albany.

"Independence" pitcher. Lent by Mrs. Crissey.

Portrait of Chancellor Livingston. Lent by Mrs. Alfred Nelson.

"Clinton vases," presented to Gov. Clinton at the opening of the Erie canal; colonial doll; child's bureau. Lent by Mrs. Janvier Le Duc.

Blue plates, colonial scenes; pitcher "Independence;" pin cushion of piece of Mrs. Washington's wedding dress; Holland sledge; rum demijohn; old view of Albany. Lent by Mrs. J. V. L. Pruyn.

Silver tankard of Myer Myers, old New York goldsmith; Paul Revere brazier. Lent by Mrs. D. F. Appleton.

Order and diploma of the Cincinnati — the only ones shown — belonging to the Rev. Dr. Linn, chaplain of the first Congress. Lent by Mrs. Dean Sage.

MSS. sermon, 1723. Lent by Mrs. George Douglas Miller.

Embroidered waistcoat (embroidered by Marie Antoinette and Madame Campany, and presented to citizen Genet); French miniatures belonging to Mrs. G. C. Genet. Lent by Mrs. Genet.

Pitch pipe owned by Col. Chester. pink brocade christening blanket of the Chester family. Lent by Miss Julia Chester Wells.

Long rosewood frame mirror; large rosewood hall clock; large painting (Deborah Glen); large spinning wheel; spinnet piano (made by Aster); large wooden clock; flax spinner; chair; painting, "Burning of Schenectady by the Indians." Lent by Mrs. Sanders, Schenectady, N. Y.

Chair. Lent by Mrs. Sanders, Albany, N. Y.

Six chairs; work table. Lent by Mrs. Ten Eyck.

Fire buckets; plates; tea pot. Lent by Mr. Lansing.

Old Van Rensselaer bronze cannon; three pieces of historic wampum made by New York Indians; gilded dove from first Dutch church of New Utrecht, Long Island; stone cannon used in the battle of Long Island. Lent by Mr. William Bayard Van Rensselaer.

Holland Dutch Bible, 256 years old, used as pulpit bible in Reformed Dutch church of Flatbush, from 1660 until 1792. (Full description on inside cover of book.) Lent by Peter J. Neefus, Flatbush, Long Island.

Roof tile from Nirasius de Sille house built New Utrecht, N. Y., 1657. In this house Gen. Nath'l Woodhull died in 1776. Lent by Mrs. Townsend Van Pelt, Van Pelt Manor, N. Y.

Dove made of wood gilded, used as decoration on sounding board of New Utrecht church, N. Y., in 1700. Lent by J. Nostrand, New Utrecht, N. Y.

Silver cup, being part of first communion service used in Reformed Dutch church of Amersfoot, now Flatlands, Kings County N. Y., etched with figures of Faith, Hope and Charity. Lent by Timothy I. Hubbard, Flatlands, N. Y.

Sword won by Gen. Stillman in first naval engagement of War of the Revolution. Lent by Mrs. Wm. Aug. White, Brooklyn, N. Y.

Book "Young Man's Best Companion," printed by Benj. Franklin, 1748. Lent by Dr. L. A. Alleman, Brooklyn, N. Y.

Silver tea set, three pieces and cover for sugar bowl, 200 years old, original owner Elizabeth Lupton; white mull hand-embroidered cape, 125 years old. Lent by Mrs. Alfred Becar, Brooklyn, N. Y.

Picture of first church erected at New Utrecht, 1700, used as hospital during Revolutionary War (water color); plate of canton blue, one of a dinner set used by Nicholas Borvenhoven, first judge of Kings County, during a visit of Gen. Geo. Washington, prior to 1793. Lent by Mrs. John F. Berry, Bensonhurst, N. Y.

Patch box, ivory and gold, 150 years old. Lent by Miss H. H. White, Brooklyn, N. Y.

Gold enamel snuff box, time of Louis XV. Lent by Miss Benson, Brooklyn, N. Y.

Green calach bonnet. Lent by Mrs. Niles Poulson, Bay Ridge, N. Y.

Pair of wool carders; pewter tureen, 1740. Lent by Mrs. Isaac Howland, Brooklyn, N. Y.

Old sampler made by Mary Comstock, early 1800. Lent by Mrs. Edmund Terry, Brooklyn. N. Y.

Silver knee buckles worn by Nat'l Davis, Roxbury, Mass., 1787. Lent by Geo. Davis Terry, Brooklyn, N. Y.

Old ivory carved powder horn etched with map of New York, colonial settlements and English coat of arms. Lent by Mrs. Otto Heinigke, Bay Ridge, N. Y.

Fan used in 1723; Dutch poem, manuscript, written by Cornelia Krosen, 1757; fine linen drawn work made in England; white lace veil worn in 1790. Lent by Miss L. G. Zabriskie, Flatbush, N. Y.

Old Dutch testament and book of psalms; Amsterdam, 1734, silver clasps (books of this kind were used by the colonial women and carried by them to church, hung by chains from their waists); bead bag, design of sheep, stream and castle; sampler, 1791; New York paper currency, 1775. Lent by Mrs. R. L. Van Kleeck, Gravesend, N. Y.

Cannon ball from battle of Long Island; foot stone, used by Elizabeth Duryea Backulow, 1760; New York Colonial currency, ten dollars and five dollar bill signed by Livingston and Tucker; muster list of a company commanded by Capt. Lester, 1780, at Lloyd's Neck; permission for market craft proclamation by Gov. Howe, 1780; Lafayette's recommendation for a colored body servant, 1784; copper warming pan, 1790; block of oak made from beam in old Middle Dutch church, 1726. Lent by Mrs. S. B. Duryea, Brooklyn, N. Y.

Fireplace tile from Bergen homestead, Brooklyn, N. Y., taken from house built in 1660; snuff box, ivory, lined with tortoise shell, with gold enamel decorations, colonial. Lent by Mrs. Tuenis G. Bergen, Brooklyn, N. Y.

Silver tray, 1770, engraved by Smart of Boston. Lent by Mrs. Gordon L. Ford, Brooklyn, N. Y.

Three pewter pitchers and mugs; one foot warmer (carved wood); one tile from Staats house; one patroon's certificate, 1659 (framed); one pair hinged spectacles (tortoise shell rims); one iron case containing scissors, etc.; one pair of old Dutch scissors; one tobacco or snuff box (brass); one lamp for heating crimping irons (brass); one receptacle for hot water (brass with wooden handle inside); one certificate of citizenship by mayor of Albany, 1766 (framed); one receipt of William Van Rensselaer, 1694 (framed); one oil painting, Fort Orange market (gilt frame); eleven engravings and etchings of old Albany; two pieces of colonial currency (on card); old Dutch bench (with sheep and goats picture); one fragment of sermon and MSS., 1723; one silver tankard (Douw family). Lent by Geo. Douglas Miller, Albany, N. Y.

Colonial pictures; twenty-two brass and pewter articles. Lent by Miss Stokes.

Chair. Lent by Charles Visscher Winne.

Worsted satchel. Lent by Mrs. A. Vander Veer.

Shoe made for Aaron Field. Lent by Mrs. L. C. Field.

Picture "General Orders." Lent by Kilian Van Rensselaer.

Crane. Lent by J. W. Thomas.

Piece lace goods. Lent by Mrs. Alfred Secor.

## AFRO-AMERICAN EXHIBIT.

### BOOKS WRITTEN BY COLORED WOMEN OF NEW YORK STATE.

"Aunt Lindy." Mrs. W. E. Matthews. Illustrated by Miss M. L. Payne.

"Sonnets." Miss H. Cordelia Ray.

"Biography of Rev. Charles B. Ray." Misses F. T. and H. H. Ray.

Typewritten poems, "Tones and Undertones." Miss M. R. Lyons.

### HANDWORK.

Specimens of typewriting. Mrs. Chase, Miss Freeman, Miss Van Buren.

*Book Binding.*

"Plush autograph album." Miss C. Post.

*Hand Made Laces.*

Four samples crocheted lace. Miss Susan G. Weeks.

Two samples crocheted lace. Miss Daisy Craig.

One sample crocheted lace. Mrs. Lowry.

One sample crocheted lace (silk). Miss C. Post.

Two samples hair pin lace. Miss Florence Spencer.

One handkerchief (Duchess point). Mrs. Ferguson. Loaned by Mrs. Carmand.

One handkerchief (Honiton). Mrs. Laura Williams.

Two scarf ends (Duchess point). Loaned by Miss J. I. Howard.

Two crocheted neckties. Mrs. Garnet.

One crocheted quilt. Mrs. A. W. Plato.

SECTION OF THE EXHIBIT OF THE ASSOCIATED ARTISTS

*Worsted Work.*

One shoulder cape; one child's sack; one cloud (worsted and net). Miss C. Post.

*Drawn Work.*

One towel. Miss Florence Lewis.
Three doilies. Mrs. Clara Foote.
One handkerchief. Miss. A. Bailey.
Two doilies. Miss Inez Treadwell.

HAND PAINTED ARTICLES.

One white satin pin cushion. Miss Ellen Ford.

One fan bag; one sachet bag. Miss Ella Spencer.

*Sofa Pillows.*

One red plush. Miss W. Hemsley.

One black and yellow satin. Mrs. M. Moore.

*Banners.*

One white satin (holly berries). Miss Nellie Ford.

One crepe de chene (wild roses). Miss E. Spencer.

*Plaeques.*

One porcelain (pinks); one porcelain (lilacs). Miss E. Spencer.

One china (wisteria). Mrs. A. Bicknell.

Two bottles (wild roses, daisies). Miss H E. Johnson.

One tile (umbrella stand). Miss A. G. Little.

EMBROIDERY.

One towel (outlined). Mrs. A. Craig.

One tray cover (violets). Mrs. G. Dennis.

Two doilies. Mrs. Alinda Spencer.

Two toilet stand mats. Mrs. Ferguson. Loaned by Miss J. I. Howard.

One five o clock tea table cover (maiden hair fern). Mrs. C. Foote.

ECCLESIASTICAL EMBROIDERY LOANED BY ST. PHILIP'S P. E. CHURCH, N. Y. CITY.

One red brocaded silk super frontal; one red brocaded silk chalice veil; one red brocaded silk pulpit hanging; one red brocaded silk burse (silk); one white brocaded silk chalice veil; one white brocaded silk burse. Embroidered by the Altar Society of St Philip's P. E. Church.

One white satin pulpit hanging. Mrs. J. F. Thomas.

MISCELLANEOUS.

One infant's dress. Miss Mary Mayo.

One corn silk fan. Mrs. Morrison — loaned by Mrs. Poindexter.

One red silk piano lamp shade. Mrs. D. Washington.

One purple and white lamp shade, paper. Miss Edith Ross.

One gilded macrame basket. Mrs. Ferguson.

One tidy (ribbon and rings). Mrs. M. Moore.

Two pastry forks. (The only pastry fork known at the Patent Office.) Invented by Mrs. A. Mangin.

PICTURES.

The Wood Gatherer (water color); A Summer Day (water color); Crossing the River (water color); Marine View; Pond Lilies; Arbutus; Tea Roses in Jar; Clematis (on glass); Tulips (on chamois); Dog Wood (on satin). Miss Ella Spencer.

Crayon portrait (Dr. J. Marion Simms). Mrs. L. E. Bargvet.

The Stag (crayon); Horses at the Trough (crayon). Miss Ellen Nowell Ford.

Landscape; A Marine View. Miss Alice G. Little.

A Snow Storm; The Stream; The Rapids: Portrait (Mr. Robert Purvis). Miss Bertha Lattimore.

Photographic Work; Pictures, photographed and retouched. Mrs. Clara S. Brown.

Etruscan Work (transferring). Miss H. E. Johnson.

COLLECTION OF ANTIQUITIES.

Two china cups and covers; three china cups and saucers; three plates (china), (brought from Paris before 1800); one china vase (1800); two brass hand screen stands (1820); one shawl worn by Miss Margaret G. Gardner, in Boston, in 1811. Loaned by Miss J. I. Howard.

One antique belt buckle (brilliants set in silver) seventeenth century, brought from England to Maryland by a persecuted Catholic; one cross (wood, nipped with gold, supposed to be a piece of the cross on which our Saviour was crucified, brought from the Holy Land by a Catholic priest of Maryland); one bridal veil worn by Miss Eliza Pearl in 1815; one shawl worn by Mrs. Anna Pearl, 1797; two bridal collars worn by Mrs. M. Barnes in 1830. Loaned by Miss J. A. E. Wood.

Piece of H. M. S. Somerset, wrecked off Cape Cod November 3, 1878. Loaned by Mrs. D. Washington.

Silver cup presented to Mrs. Catherine Robinson in 1852. She was a professional nurse in the New York City Hospital. Loaned by Miss J. I. Howard.

Antique water cooler. Loaned by Mrs. H. Poindexter.

# NEW YORK LOAN EXHIBITION OF EMBROIDERIES, MINIATURES, WATCHES, SNUFFBOXES, FANS AND LACES.

## COLLECTION OF EMBROIDERIES.

Rustic scene, from the San Donato collection; large door frame embroidery, Italian. Lent by Mrs. A. S. Hewitt, New York.

Altar front, Louis XIII; altar front, Spanish, Louis XIV; white scarf; old table cover, Italian, Louis XIV; French embroidery, Louis XIV; altar cloth, fine French point, Louis XV; table cloth, Louis XVI; altar cloth on cream ground, Old French, Louis XV. Lent by Mr. James A. Garland, New York.

Oriental embroidery, Salonika. Lent by Mrs. F. R. Jones, New York.

Italian, 16th century; Italian, 16th century; three figures in frame, French, 17th century; arms of Castile and Leon, 16th century; knight with shield and spear, Portuguese, 16th century; church piece (three angels), Italian, 15th century; chasuble, five full length and two half length figures, from St. Donato collection; dalmatique (one-half) square of gold embroidery with four shells in corners, Spanish, 16th century. Lent by Mrs. David L. Einstein, New York.

Altar front, Italian, 17th or 18th century; embroidery on moire edged with silver lace and gilt. Lent by Mr. Robert Hoe, New York.

Persian shawl. Lent by Mrs. Henry G. Marquand, New York.

Flight into Egypt, Old French; Holy Family; St. Jerome, Florentine; St. Francoise; Holy Family in applique, Renaissance; St. John, Italian; Moses and Miriam, Italian; St. Elizabeth; The Annunciation; St. Bartholomew. Lent by Mrs. Richard M. Hunt, New York.

Altar front, Italian, 17th century. Lent by Miss Chanler, New York.

Royal arms of Spain, 17th century; three pieces of embroidery for a cope, Belgian, 16th century; chair seat, design, crown and initial of Napoleon I, embroidered by the Empress, Marie Louise. Lent by Mrs. J. V. L. Pruyn, Albany.

Altar front, Limoges, late 17th century. Lent by Mrs. A. Cass Canfield, New York.

Cope, probably Italian, 17th century; priest's vestment, probably Italian, 17th century. Lent by Allard & Co., New York.

Chasuble, late 18th century. Lent by Mr. F. Hopkinson Smith, New York.

Genoese embroidery (early 16th century), restored by Miss Seward. Lent by Miss Olive Risley Seward.

Gilt embroidery with jewels, on crimson satin, 17th century. Lent by Miss Cooper, New York.

Piece for skirt of dress, on white silk. Lent by Mrs. Eben Wright, New York.

Old Spanish, 18th century. Lent by Mrs. A. M. Dodge, New York.

Church piece, angels in adoration; church piece, Adam and Eve. Lent by Sisters of St. Mary, New York.

## COLLECTION OF MINIATURES, WATCHES, SNUFFBOXES, FANS, ETC.

Portrait of Charles II; portrait of Martha Washington at sixteen years of age. Lent by Mrs. Westervelt, New York.

Snuffbox, head of Charles II carved in oak; watch, gold repousse. Lent by Mrs. Douglas Robinson, New York.

Portrait of a lady; portrait of a lady; box, with miniature and turquoises. Lent by Mrs. Edward Adams, New York.

Portrait of gentleman, 1820, gold and pearl frame; portrait of La Comtesse De La Rochefontaine, antique frame; portrait of lady; portrait of lady, blue headdress; portrait of lady, white gown; portrait of a lady, by Chapon, 1830. Lent by Mrs. D. L. Einstein, New York.

Portrait of a lady, by James Holmes; portrait of a lady, by Brunet; portrait of a lady, by John Smart. Lent by Mrs. Morris K. Jesup, New York.

Portrait of Alexis Eustaphieve; portrait of a lady, time, Marie Antoinette; portrait of gentleman, on porcelain; portrait of Louis Philippe, on porcelain. Lent by Miss Eustaphieve, Buffalo.

Box, tortoise shell, ivory medallion on lid; box, with portraits on lid; snuffbox, enamel; fan, carved sticks, gold decoration, Louis XVI. Lent by Mrs. Jesse Seligman, New York.

Portrait of the Duchess of Castlemaine; etui, gold, inlaid; fan, Spanish, mourning, old. Lent by Mrs. A. M. Dodge, New York.

Portrait of Lady Mary Wilbraham, Countess of Bedford. Lent by Black, Starr & Frost, New York.

Watch, silver repousse, enamel face; watch, gold, enamel back, tombstone;

fan, French. Lent by Mrs. F. Hopkinson Smith, New York.

Portrait of Fitz Greene Halleck by Nathaniel Rogers; portrait of Hugh Walsh. Lent by Mrs. W. L. Andrews, New York.

Snuffbox, onyx, raised fruits in precious stones; box, enameled on gold, subject on lid: "Going to the Chase," watch, blue enamel back, "Children at Play," Louis XVI; watch, enamel outside and inside of case, Louis XIV; portrait of Oliver Cromwell; portrait of Frances Dayrell, by Zincke; portrait of Trevor Hill, Esq., by Hillsborough; portrait of gentleman, unknown; portrait of Boswell, by Zincke; portrait of Eugene Beauharnais, by A. Carteret; watch, small, enamel back, Haunt Freres, 17th century; watch, jewelled back, Julien Le Roy, Louis XV; snuffbox, mosaic of stones from Saxony, miniature on lid, snuffbox, gold chasing all over; snuffbox, enamel, Greek scenes; mosaic box, with musical instruments; snuffbox, enamel on lid, by Zincke; bonbon box, round, Wedgewood on lid; portrait of Prince Regent, by Henry Bone; portrait of Charles I, by Sir John Rose; portrait of Henrietta Maria. Lent by Mr. E. J. Berwind, New York.

Portrait of Duchess Du Berry; snuff box, Louis XIV; snuffbox, empire; coronation box, snuffbox, Louis XIV; snuff box, Directoire, portrait of lady, by Engelhardt. Lent by Mr. John E. Parsons, New York.

Portrait, La Marquise de Pompadour, by Vastier, fan, very old, shell sticks, fan, ivory sticks, Louis XVI. Lent by Mrs. F. R. Halsey, New York.

Jerrot watch, enameled, with Rhine stones; Bourquin watch, enameled scene, tombstone; watch, four dials on face, watch, enamel (Napres), Le Roy watch, octagon enamel, bracelet, California nuggets Lent by Mr W H Aspinwall, New York

Portrait of Mathias Nicoll, of Stratford, Connecticut. Lent by Mrs Prescott Hall Butler, New York.

Box, tortoise shell, set in gold; etui, brass repousse, fan, shell sticks, carved and gilt, Louis XVI, fan, carved ivory, Directoire, Chinese figures. Lent by Mrs. Eben Wright, New York

Portrait of Chevalier Bayard; portrait of Empress Josephine, portrait of Marie Louise; portrait of Napoleon I. Lent by Mrs J V L Pruyn, Albany.

Portrait of Elizabeth Erving, wife of Governor James Bowdoin, by Malbone; portrait of Hon. James Bowdoin, son of Governor James Bowdoin, by Malbone portrait of Elizabeth Bowdoin, daughter of Governor James Bowdoin, by Malbone. Lent by Mrs. George S. Bowdoin, New York.

Box, gold, oval; box, gold chased, round; box, gold, oval; box, oblong, blue enamel, miniature on lid; box, gold, round; box, gold, enamel on lid; small enamelled watch, shape of shell; gold watch, raised figures under crystal, strikes hours; box, oblong, blue enamel, miniature on lid, pastoral subject; large gold watch, case of pierced gold, Wilson, maker; open-face gold watch, enamel back, Berthond, maker; gold and enamel watch, two rows of pearls, Guece, maker; patch box, gold; chased gold watch, with chased silver face; repousse gold watch, Bicfield, maker; unique enameled watch, in shape of harp; portrait, Italian, with small coat of arms. Lent by Mr. William Hull Wickham, New York.

Box, gold, figures in Vernis Martin; box, silver and yellow, niello, Louis XIV; box, tortoise shell, Louis XIV; box, red and gold, enamel (rare), George III; fruit knife, Louis XIV; etui, gold, Louis XIV; etui, gold, Louis XVI; portrait of Dean Swift, by Craft; watch and chatelaine; watch and chatelaine. Lent by Miss Hewitt, New York.

Portrait of Napoleon I when a child; fan, Vernis Martin; fan, carved pearl and gold sticks. Lent by Mrs. Pierre Barlow, New York.

Watch, antique, silver painted; watch, enamel; watch, gold, antique; watch, gold, watch, silver, with black diamonds; watch, painted; fan, presented to bride of Alexander I, of Russia; fan, Louis XV, fan (Nacre), Louis XV; fan (Nacre), Louis XIV, fan, ivory, Louis XV; fan, ivory, Louis XV. Lent by Tiffany & Co., New York.

Pendant, enameled on gold (lost art). Lent by Mrs. William E. Dodge, New York.

Portrait of Louis Atterbury (married Catherine Boudinot), by Field. Lent by Mrs H P Loomis, New York.

Snuffbox, gold, with miniature; fan, ivory and gold sticks, satin leaf, Louis XVI. Lent by Mrs. Henry Clews, New York.

Portrait of Mrs. Tickell, by Cosway; portrait of young lady, by Isabey; pair of rural landscapes, by Blavenberghe; box, gold, oval, green enamel; box, gold, oblong, octagonal, bleu du roi enamel; box, gold, miniature of Mme. de Maintenon, Louis XIV; box, gold, oblong, enameled picture on lid; box, gold, oblong, group, Frederick the Great and others in smoky topaz; box, gold, oval, chased, picture on cover, Louis XIV, box, oval, gold, blue enamel, with miniature of Mme. de Pompadour, Louis XV; box, gold, oblong, carved on all sides with groups of cupids; portrait of a young lady; portrait of Maria Foote, in pearl frame; portrait

of Duchess of Devonshire, in pearl frame. Lent by Mr. Peter Marie, New York.

Portrait of lady, by Cosway; fan, painted, carved ivory sticks; fan, carved shell sticks. Lent by Mrs. Henry G. Marquand, New York.

Snuffbox, inlaid, gold. Lent by Mr. O. Egerton Schmidt, New York.

Portrait of Archibald Gracie, by Malbone. Lent by Mrs. James K. Gracie, New York.

Portrait of Charles I and Henrietta Maria. Lent by Mrs. Henry Draper, New York.

Fan, modern French. Lent by Mrs. J. Kennedy Tod, New York.

Fan, Italian leaf, Chinese sticks, Louis XVI. Lent by Mrs. Marion Story, Westchester.

Carved ivory fan; horn fan; horn fan; empire fan; mourning fan. Lent by Mrs. J. W. Pinchot, New York.

Fan, old Chinese, silver filagree, enameled in colors. Lent by Mrs. F. R. Jones, New York.

Fan, painted, carved and gold sticks, belonged to Marie Antoinette; fan, carved ivory, painted leaf, Louis XV. Lent by Mrs. W. D. Sloane, New York.

Fan, Louis XIV. Lent by Miss Frelinghuysen, New York.

Fan, Louis XVI. Lent by Mrs. H. Walter Webb, New York.

Fan, fete champetre, nacre stick, Louis XV. Lent by Mrs. Wysong, New York.

Fan, pastoral subject, Louis XV; fan Italian, lace painted sticks, middle 18th century; fan, Italian, lace painted sticks, middle 18th century. Lent by Mrs. Dwight Collier, New York.

Fan, carved ivory sticks, leaf lace, belonged to Empress Eugenie. Lent by Mr. John Wool Griswold, Troy.

Fan, Eastern carved ivory, 18th century Lent by Mrs. Richard Derby, New York.

Fan, modern French; fan, les incroyables; fan, Venus Martin; fan, ivory sticks, Louis XV; fan, Italian, marked E. W. Lent by Mrs. W. Seward Webb, New York.

Fan, Directoire, ivory sticks; fan, French, Chinese decoration; fan, Italian, pen and ink drawing, "Battle of the Amazons," 17th century; fan, pear and gold sticks; fan, carved ivory (Chinese), time of 1st Empire; fan, French, Chinese decorations; fan, French, inlaid shell sticks; fan, Spanish, with spangles. Lent by Mrs. R. M. Hunt, New York.

## LACIS OR DARNED NETTING.

Insertion of yellow lacis, geometric pattern, Italian, about 1468–80; insertion of lacis (white), Italian, 1480 to 1500; table cover, darned netting, Italian, 1490–1500; lacis, geometric design, border of Genoa bobbin lace, Italian, 1500–10; squares of lacis and drawnwork, German, about 1500. Lent by Mrs. A. S. Hewitt, New York.

Table cover, lacis in squares, Spanish, about 1500. Lent by Mrs. Frederick Goodridge, New York.

Chalice veil, ecru lacis. Lent by Mrs. Henry C. Howells, Flushing, Long Island.

Lacis and reticella, Italian, 1550–70. Lent by Mrs. J. Boorman Johnston, New York.

Lacis, Spanish, about 1500: lacis with star design, Spanish, 1500; border with points Panama lacis, 1520. Lent by Mrs. Jose Ma. Munoz, New York.

Scarf of lacis, Russian, about 1620. Lent by Mrs Edward Crosby, New York.

Table scarf, lacis, Italian Renaissance, about 1500. Lent by Miss Lucilla Allen, New York.

Border of colored lacis, red and green, 1420–30. Lent by Mrs. Newbold, New York.

## PUNTO TIRATO OR DRAWNWORK, PUNTO TAGLIATO OR CUTWORK AND RETICELLA.

White linen altar frontal drawnwork, Italian Renaissance design, from 1530–40: towel with reticella insertion and border, Italian, from 1550–60; bit of punto tagliato or cutwork, Spanish, from 1530–40. Lent by Mrs. James W. Pinchot, New York.

Bit of punto tirato and reticella, Italian, with border of pillow lace, 1450–80 insertion of punto tirato and reticella, Italian, from 1450–80. Lent by Mrs. Frederick Goodridge, New York.

Table scarf, very fine reticella squares, Italian, about 1500. Lent by Mrs. Alexander Van Nest, New York.

Punto tirato and reticella, Italian, 1450. Lent by Mrs. Lathrop, New York.

Border of linen cutwork, pillow lace edge, Italian, from 1520–40; square of linen drawnwork and cutwork, Italian, about 1620; table cover, reticella squares and embroidery, Italian, from 1560–80; small square of linen cutwork, with punto a groppo, from 1540–60 square of cutwork, Spanish, 1680–1700; towel ends, woven red silk, German, 1480–1500 border in red silk on linen, Sicily, 1380–1400; insertion red silk on linen design, Italian, 1480–1500. Lent by Mrs. A. S. Hewitt, New York.

Border of linen punto tagliato, Italian, 1500; chalice veil of reticella, Italian, about 1560. Lent by Mrs. J. Boorman Johnston, New York.

Square of reticella and embroidery, Italian, 1590–1600; bit of punto tirato,

THE EXHIBIT OF COSTUMED DOLLS.

(Representing different periods of American Dress since 1492.)

Italian, 1500. Lent by Mrs. Newbold, New York.

Border of punto tirato, with yellow silk design of animals darned in with linen thread, from Greek islands, 1500. Lent by Mrs. Frederic R. Jones, New York.

Two pieces of Russian pillow lace, about 1780–1800. Lent by Mrs. Arthur Murray Dodge, New York.

Two towel ends, drawnwork, with colored silk, Russian, about 1650. Lent by Mrs. Edward Crosby, New York.

### NORTH ITALY.

Bit of lace with rounded points, pillow-made, Genoa. 1580–90; insertion pillow lace, Italian, 1600–10. Lent by Mrs. William Iselin, New York.

Bit of macrame, Genoa, 1660–90. Lent by Mrs. John Minturn, New York.

Needle-point, with pointed edge, very perfect, north Italy, 1630–40; collar, needle-point, Genoa, about 1660–70. Lent by Mrs. James Pinchot, New York.

Bertha, Genoa needle-point, 1530–50. Lent by Mr. William H. Aspinwall, New York.

Collar, very fine Genoa needle-point, 1580; narrow border of punto in aria, 1530; small square cutwork, Greek, 1480; little cover with Genoa pillow lace, 1580–1600; bertha, reticella soleil, 1520. Lent by Mrs. J. Boorman Johnston, New York.

Yard of udine lace, about 1600. Lent by Mrs. Arthur Murray Dodge, New York.

Bit of so-called Raphael lace udine, about 1650. Lent by Mrs. Frederick Goodridge, New York.

Bertha, flat-point, with border of Gothic needle-point, Genoa, 1580. Lent by Mrs. John V. L. Pruyn, Albany.

Linen square, with pillow lace, Genoa, 1580–1600; linen square, reticella and punto in aria insertion, Italian, 1530; bit of punto in aria, 1530-50; reticella square, Italian, 1660–80; one piece of north Italian needle-point punto in aria, 1530–50. Lent by Mrs. A. S. Hewitt, New York.

Tape lace, curious and rare, north Italy, 17th century. Lent by Mrs. H. Eugene Coe, New York.

### VENICE FLAT POINT.

Small altar frontal, A. D. 1660–80. Lent by Mrs. J. West Roosevelt, New York.

One collar, flat point, A. D. 1680–1700; cap, flat point, A. D. 1680–1700. Lent by Mrs. Derby, New York.

Punto a vermicelli, 1680. Lent by Miss Furniss, New York.

Flounce, flat point, 1780. Lent by Mrs. Morgan, New York.

Two cuffs and a yard of flat point, 1650. Lent by Mrs. Theodore Gibbs, New York.

### VENICE RELIEFS.

Cape of high relief, 1680–90; cape of low relief, Decadence, 1700; one-half yard high relief, 1640. Lent by Mrs. P. T. Barlow, New York.

Front of priest robe, with chalice; two yards of lace, about 1580. Lent by Mrs. Drexel, New York.

Collar, in high relief, 1680. Lent by Miss Wilkinson, Buffalo.

One deep flounce, in perfect order, high relief, about 1680. Lent by Mrs. R. W. de Forest, New York.

### VENICE ROSE POINTS.

Flounce, with a continuous design which never repeats itself, very fine, 1700–20. Lent by Mrs. Bayard Cutting, New York.

Three pieces of very fine rose point design, Louis XIV, beautiful specimen; collar, rose point, later period. Lent by Mrs. Theodore Gibbs, New York.

Bertha, rose point, 1650–70. Lent by Mrs. R. H. Derby, New York.

Collar and lace of rose point, 1650–60. Lent by Mrs. Henri Braun, New York.

Plastron, French design, rose point, 1690; collar, French design, rose point, 1685; collar, French design, rose point, 1685; collar, Venetian rose point, 1680. Lent by Mrs. J. Boorman Johnston, New York.

### POINT DE MILAN.

Flounce à réseau Milan, 1650–70, said to have belonged to Doge Andrea Doria. Lent by Mrs. Frederick Goodridge, New York.

Flounce, Renaissance design, réseau Milan, 1650–60. Lent by Mrs. Pinchot, New York.

Flounce, réseau Milan design, in sections; Renaissance vine pattern, in bouquets, beginning of the bow-knot era, Louis XIV, 1680–90. Lent by Mrs. J. West Roosevelt, New York.

Flounce, réseau Milan, Renaissance design. 1580. Lent by Mrs. d'Oremieulx, New York.

Flounce, réseau Milan, scrolls and birds, 1600. Lent by Mrs. A. S. Hewitt, New York.

Flounce, réseau Milan, 1600. Lent by Mrs. John V. L. Pruyn, Albany.

Bertha, guipure de Milan, 1660. Lent by Mrs. John Minturn, New York.

Bit of guipure de Milan, very fine, with edging of Flemish lace, 1660. Lent by Mrs. F. E. Chadwick, Washington.

Flounce of Fiume lace. Lent by Mrs. Theodore Gibbs, New York.

Collection of small examples of lace. Lent by Miss Eleanor Hewitt, New York.

BURANO (AN ISLAND NEAR VENICE).

Flounce, Louis XV design, said to have belonged to the patrician Venier family of Venice, of whom one was Doge, about 1500; two pieces of narrow lace. Lent by Mrs. Dwight Collier, New York.

Two bretelles or sleeve trimmings, Louis XV design, about 1750. Lent by Mrs. Bayard Cutting, New York.

Half yard Louis XVI design, 1780. Lent by Mrs. d'Oremieulx, New York.

Three pieces, about 1760. Lent by Mrs. J. Boorman Johnston, New York.

Louis XV design, 1740-60. Lent by Mrs. A. M. Dodge, New York.

Louis XVI design, 1780-90. Lent by Mrs. P. M. Bryson, New York.

POINT DE FRANCE.

Deep flounce of six yards of Argentan, ordered by Louis XVI for Marie Antoinette, exquisite specimen, about 1770-80. Lent by Mrs. Vanderbilt, New York.

Flounce, with Alencon fond, Louis XVI, about 1780. Lent by Mrs. J. Pierpont Morgan, New York.

Lace initials of Empress Marie Louise and imperial bees; Alencon fond, with Empire design. Lent by Miss Pierpont Morgan, New York.

Barbe, Alencon, with Empire design; jabot of narrow Alencon. Lent by Mrs J. C. Green, New York.

Cap with ruffle, Argentan fond, design Louis XV, 1765-75. Lent by Mrs. Newbold, New York.

Lace, design Louis XIV, 1700. Lent by Mrs. William Iselin, New York.

Lace, with Empire design. Lent by Mrs. R. W. de Forest, New York.

Barbe, Argentan. Lent by Mrs. Jose Ma. Munoz, New York.

Lace, Alencon fond, Empire design; three yards Alencon, Louis XIV, 1700; one yard Argentan, Louis XV, 1760; barbe, Alencon, 1700; barbe, Alencon, 1780; one and a half Alencon, Louis XVI design. Lent by Mrs. J. Boorman Johnston, New York.

Flounce, Louis XIV design; réseau irregulier de Milan, 1680-1700; barbe, Louis XV design; réseau Milan, very fine, 1750-60. Lent by Mrs. Newbold Morris, New York.

Lace au vrai réseau, design Louis XIV, 1690-1700. Lent by Mrs. John Minturn, New York.

Collar, and bride's picotées, 1700-20. Lent by Mrs. J. West Roosevelt, New York.

One cape, flat-point, with scattered reliefs, design Louis XV. Lent by Mrs. John V. L. Pruyn, Albany.

Flounce, three yards and three-fourths, by twenty-six inches deep, réseau Milan and bride's design, Louis XIV, 1660, a bertha, eight and one half yards. Lent through Mrs. Niles, Santa Barbara, Cal.

Barbe, Argentan, 1680, bertha, point de Sedan, 1680. Lent by Mrs. J. Boorman Johnston, New York.

Plastron, point flat de France, 1670. Lent by Mrs. Newbold, New York.

GUIPURES DE FLANDRES.

Flounce, Flemish au réseau, design early Baroque, 1680. Lent by Mrs. Bayard Cutting, New York.

Cape. Flemish guipure, 1700-10; Louis XIV design, from 1700-10. Lent by Mrs. d'Oremieulx, New York.

Flounce, Flemish à réseau Milan, design Louis XIV, 1690-1700; lace, narrower, early Louis XIV; guipure de Flandres, and bride's picotées. Lent by Mrs Bird, New York.

Flounce, Brabant, and bride's picotées, two patterns, first, 1780, second, 1700. Lent by Mrs. Newbold Morris, New York.

Three yards lace, Flandres à réseau Milan, Louis XIV design, about 1670. Lent by Miss M. Louise Wilkinson, Buffalo.

Three yards, twelve inches, by eight inches wide, guipure de Flandres, about 1710. Lent through Mrs. M. G. R. Niles, Santa Barbara, Cal.

AMERICA.

Drawnwork, unfinished, with lace stiches, worked by Susannah, wife of Colonel Vaughn, who learned in England about 1730. Lent by Miss Julia Wells, New York.

Handkerchief of drawnwork, made by Elizabeth Bleecker, wife of Peter Brinkerhoff, of Albany, New York, born 1777. Lent by Mrs. F. E. Chadwick, Washington, D. C.

Crewel-work, done by Mrs. M. K. Hoppin, 1805. Lent by Mrs. J. Boorman Johnston, New York.

White net veil, embroidered by hand, with lace stitches, by Miss Delamater, in New York, about 1820. Lent by Mrs. Charles Chandler, Philadelphia.

Embroidered dress, unfinished, worked by Mrs. Wolcott Gibbs, 1816; white heart-shaped reticule, with pink satin bag, embroidered with ribbon work, worked by Mrs. Wolcott Gibbs, 1816. Lent by her daughter, Mrs. d'Oremieulx, New York.

Linen sampler, worked in blue silk by Miss Sarah Gibbs in 1750, daughter of

George Gibbs, of Newport, Rhode Island, and aunt of ex Governor Wm. Channing Gibbs, of Rhode Island. Lent by her great grandniece Miss Emily Tuckerman, Washington, D. C.

Sampler, worked by Elizabeth Elmendorf, 1760. Lent by her great grandniece Mrs George Waddington, New York.

Handkerchief, Mexican drawnwork. Lent by Mrs. James Pinchot, New York.

Biblical sampler; two Mexican samplers of embroidery and drawnwork. Lent by Mrs. Sampson, New York.

### BRABANT AND FLANDERS.

Barbe, Louis XIV, Brabant, 1690–1700; two sleeve pieces au vrai réseau, Louis XIV design, Brabant, 1680–1700. Lent by Mrs. P. M. Bryson, New York.

Cap, a fond de neige, Brabant, 1650–60; barbe, Louis XIV, au vrai réseau, 1680–90 barbe, Brabant, 1680; one half barbe, facon Angleterre, 1690 Lent by Mrs. Jose Ma. Munoz, New York.

Frill of lace around cap, Brabant, Mechlin a fond de neige, 1730–40; one and one-half yards, Brabant à fond double, 1740–50. Lent by Mrs. P. S. Barlow, New York.

Lace, needle-point, very fine, Brabant, Louis XIV, 1680; lace, Brabant, au réseau; lace, Flanders, facon Angleterre, 1740. Lent by Mrs. Arthur Murray Dodge, New York.

Collarette, Louis XIV, Brabant, 1700. Lent by Miss M. Louise Wilkinson, Buffalo

Barbe, facon Angleterre, Flanders, 1700–20; barbe, gnipure de Flandres, 1750–60; Valenciennes, or Bèuche à fond de neige, early Louis XIV design, 1680 to 1700. Lent by Mrs. d'Oremieulx, New York.

Lace, Brabant, 1700. Lent by Mrs. Theodore K Gibbs, New York.

Barbe, facon Angleterre, Flanders, 1690. Lent by Mrs. Charles Chandler, Philadelphia.

Yard of Bèuche. Lent by Mrs. Loyall Farragut, New York.

Barbe, Brabant, 1680. Lent by Mrs. J. Boorman Johnston, New York.

Collar, Watteau design; pillow lace, late 18th century. Lent by Mrs. John C. Green, New York.

### SPANISH BLONDES.

Black mantilla, pillow made, au vrai réseau, Spanish, 1800. scarf, black, Empire design, hand darned. Lent by Mrs. F. Hopkinson Smith, New York.

Spanish scarf, black, au vrai réseau, 1810 black foud de Mantille, design birds, au vrai réseau, Bayeux, 1770. Lent by Mrs. Arthur Murray Dodge, New York.

Black Spanish mantilla, au vrai réseau, about 1780–90; black Spanish scarf, Empire design. Lent by Mrs. Jose Ma. Munoz, New York.

Black Spanish scarf, beautiful Moorish design, au vrai réseau; mantilla, black Spanish, au vrai réseau, 1780; two bits of narrow lace, silk and thread. Lent by Mrs. Theodore K. Gibbs, New York.

Eight yards of black thread lace, Chantilly. Lent by Mrs. Henri Braun, New York.

Lace, black, with trees, Empire style. Lent by Miss A. V. R. Ogden, New York.

Bertha, white and silver, Spanish, 1770–80; flounce, white, Spanish blonde, with gold threads, 1750–60. Lent by Mr. John Bensusan, New York.

White blonde veil, Louis XV design, 1765–70. Lent by Mrs. Eben Wright, New York.

One white Spanish blonde scarf, aux brides, very curious, 1780. Lent by Miss Louise Wilkinson, Buffalo.

### MECHLIN AND VALENCIENNES, LILLE AND TONDERN.

Mechlin, about 1700. Lent by Mrs. Bird, New York.

Mechlin, design Louis XIV, 1700; Brabant au réseau design with flowers in pots, about 1690. Lent by Mrs. Eben Wright, New York.

Mechlin, Louis XIV, 1690–1700; one-half barbe guipure de Malmes, 1740–50. Lent by Mrs. d'Oremieulx, New York.

Mechlin, about 1790. Lent by Miss Julia Wells, New York.

Mechlin, about 1750. Lent by Mrs. P. M. Bryson, New York.

Mechlin, 1730–40; Mechlin, 1730–40; Mechlin, Louis XV design. Lent by Mrs. Wm. Iselin, New York.

Mechlin, design peacocks, 1700–30. Lent by Mrs. John Minturn, New York.

Mechlin, narrow, 1700; broader, 1750. Lent by Mrs. J. Boorman Johnston, New York.

Mechlin, rose design, 1800; Mechlin, Greek border, 1810. Mechlin, flower scene, 1800. Lent by Mrs A. V. R Ogden.

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Mechlin, worn on a bride's dress in 1816. Lent by Miss Mary White, New York.

Flounce of Mechlin, 1790–1800; narrow lace to match.

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Lace, Lille à bouquets, 1710–80. Lent by Mrs. d'Oremieulx, New York.

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*Schleswig-Holstein, Denmark.*

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Flounce of Valencienne, Louis XIV design, rare and beautiful specimen, 1680. Lent by Mrs. William Kent, New York.

Early Valencienne, Louis XIV, 1680–1700. Lent by Mrs. d'Oremieulx, New York.

Barbe, old Valencienne, 1700–10. Lent by Mrs Jose Ma. Munoz, New York.

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Barbe, old Valencienne, 1650. lace, Louis XVI design, 1785; lace, 1670. Lent by Mrs. J. Boorman Johnston, New York

Lace, Louis XVI design. Lent by Mrs. Lathrop, Flushing

Handkerchief and Valencienne, 1800.

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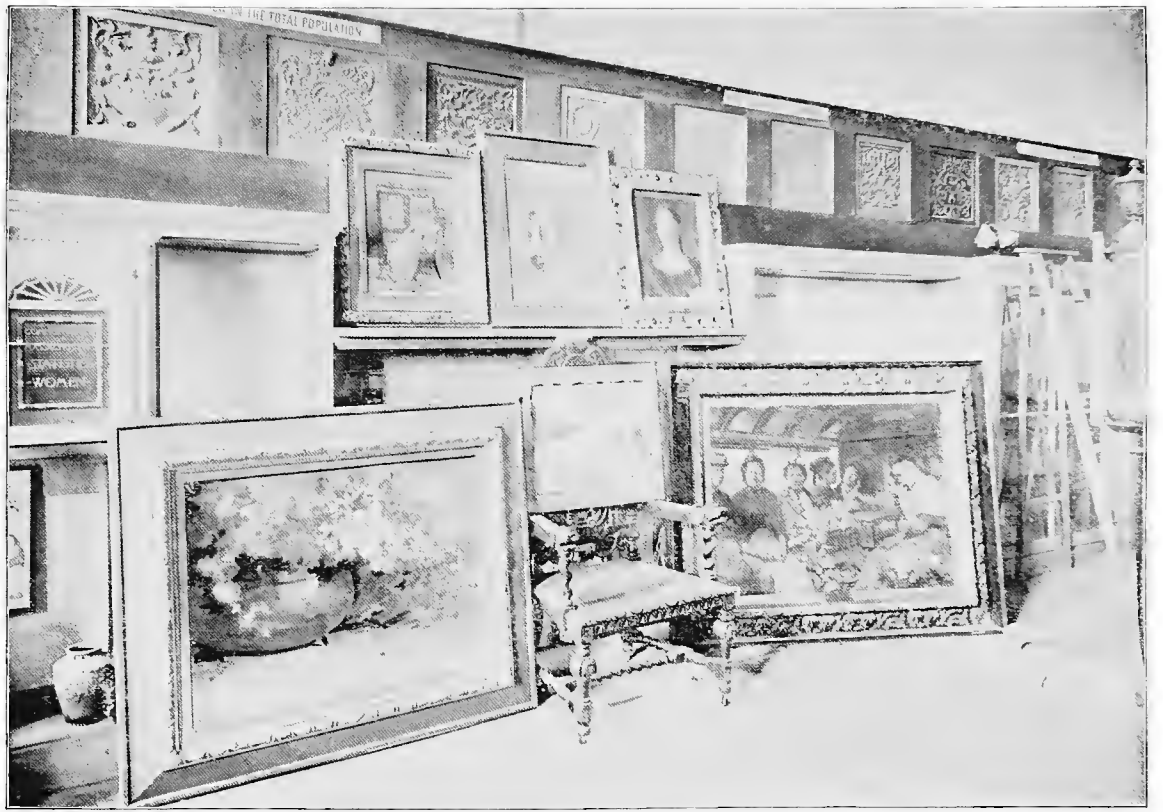


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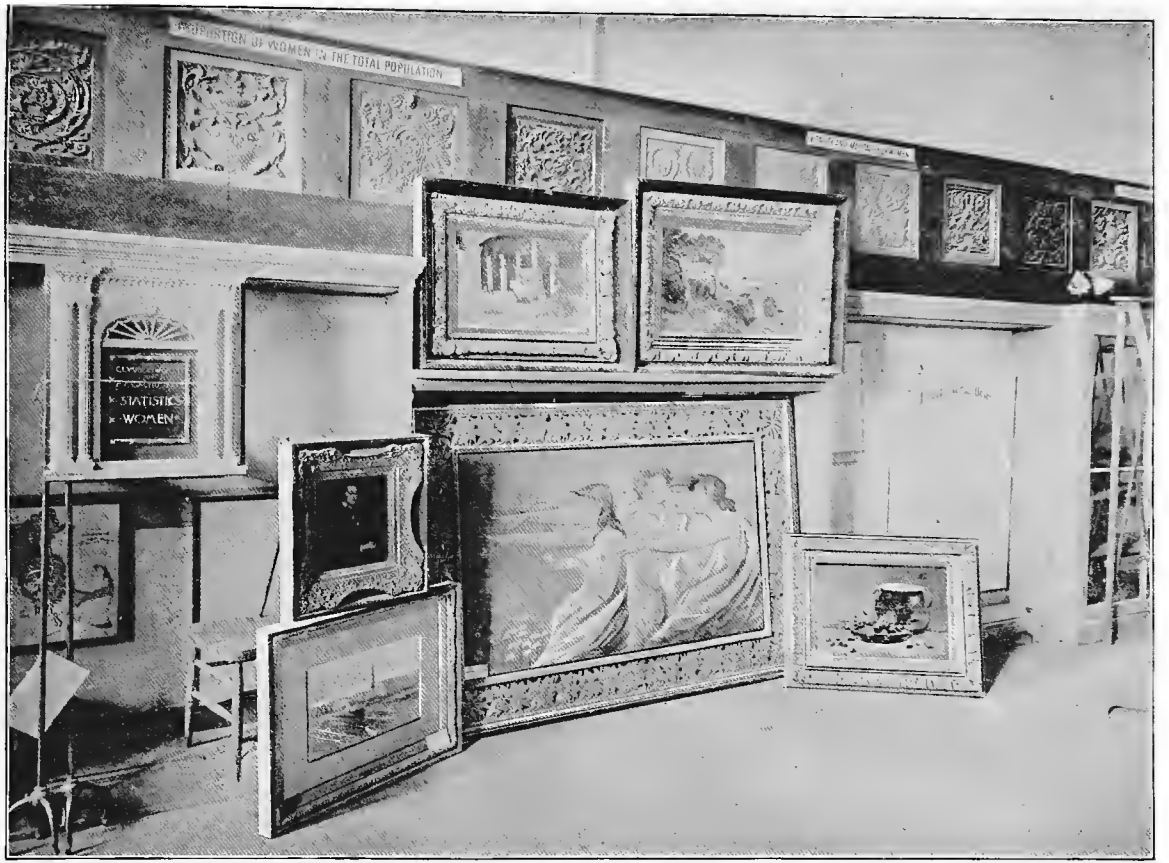


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Whittlesey, Mrs. A. G. Ed. 1 mag.
Wicks, Mrs. Mary Head; nat. 1 vol.
Wickes, Mrs. Cynthia. 1 vol.
Wieting, Mary Elizabeth. 1 vol.
Wiggin, Mrs. Kate Douglas. 7 vols.
Wilbour, Charlotte Beebe. 1 vol.
Wilcox, Mrs. Ella (Wheeler), 1845; res. 11 vols.
Wildrick, Mrs. Marion (White); res. 4 vols.
Wilkins, Eva. 3 vols.
Wilkinson, Mrs. Ella (Crane). 2 vols.
Willard, Mrs. Emma (Hart), 1787–1870; res. 24 vols.; and Woodbridge, W. C. 3 vols.
Willard, Frances Elizabeth, 1839; nat. 6 vols.
Willard, Kate Livingston. 1 vol.
Williams, Mrs. Fanny Johnson; nat. 1 pam.
Williams, Harriette K.; and Warlow, Mary S., and Peck, W. M. 1 vol.
Williams, Lucy Ford. 1 vol.
Williams, Mrs. Martha McCulloch. 1 vol.
Williams, Mrs. Martha (Noyes), 1813–79; nat. 2 vols.
Williams, Mrs. Mary J. (Downer). 1 vol.
Williams, Mrs. Rhoby (Scramling). 1849; nat. 3 vols.
Williams, Mrs. Sophia Wells (Royce), 1850; nat. 2 vols.
Williams, Mrs. Theodore C. Comp. 1 vol.
Willing, Mrs. Jennie Fowler; res. 9 vols.; and Clemens, Mrs. E. J. 1 vol.
Willis, Julia A., *ps.* see Kempshall, Julia A.
Willis, Mrs. Love M. 2 vols.
Willson, Mrs. Arabella M. (Stuart). 3 vols.
Wilson, Edith. 1 vol.
Wing, Mrs. Amelia Kempshall; nat. 1 vol.
Winter, Mrs. William, *ps.* Elizabeth Campbell. 8 vols.
Winslow, Margaret E. 23 vols. Ed. 1 vol.
Witherspoon, E. S. 2 vols.
Woodruff, Mrs. J. L. M. *ps.* W. M. L. J. 5 vols.; Hamilton, A. E., and others. 1 vol.
Wright, Elizabeth C. 1 vol.
Wright, Henrietta Christian; nat. 6 vols.
Wright, Mrs. Julia (McNair), *ps.* Aunt Sophronia, 1840; nat. 83 vols. Comp. 2 vols.
Wright, Mrs. Thomas. 1 vol.
Woman's Law Class. 1 vol.
Women's Literary Club, Dunkirk, N.Y., see Dunkirk, N. Y., Women's Literary Club.
Wood, Alice, and Perkins, Rose, and Perkins, A. J. T. 1 vol.
Woodbridge, Abby Dwight, 1808–66. 1 vol.
Woods, Mrs. Kate Tannatt. 1 vol.
Woodward, Mrs. Eliza A. (Woodbury). 1 vol.
Yawger, Rose N. 1 vol.
Yechton, Barbara, *ps.* see Krause, Lyda F.
Yendes, Lucy A. 1 vol.
Yewrownckie, Aunt, *ps.* see Blinn, Mrs. Frances Gray.
Youmans, Eliza Ann, 1827; nat. 5 vols.; ed. 1 vol.; tr. 1 vol.
Young, Mrs. Julia Evelyn (Ditto), 1857; nat. 1 vol.
Zerega, Mrs. Katharine Berry di. 1 vol.; tr. 1 vol.
Anonymous. 11 vols.

WOMAN'S BUILDING

# REPORT ON THE AGRICULTURAL EXHIBIT.

By JAMES WOOD, Mount Kisco, Director in Chief.

In July, 1892, the World's Fair managers for the State of New York requested Mr. James Wood, of Mount Kisco, to take charge of the work of preparing and installing New York's agricultural exhibit at the Columbian Exposition, with the title of director in chief, and the duties of the position were entered upon the first of August. The board appointed as secretary of the bureau, Francis L. Underhill, of Mount Kisco. The State Agricultural Society was requested to recommend a competent person, familiar with the agriculture of the State, who could render effective assistance in the collection of the exhibits, and its executive board proposed Col. Hezekiah Bowen, of Medina, Orleans county, who had long been connected with the State fairs as general superintendent, and who was at once appointed for the service indicated.

It was determined that the exhibit should, if possible, be made to illustrate the State's varied agricultural interests. In the almost endless variety of these New York is peculiar. The districts of the Mississippi valley and the Rocky Mountain slopes have taken from her a great share of the grain growing and the meat production that were once of paramount importance, but the intelligence and enterprise of her people have sought and developed a great variety of other interests until our agriculture has become the most diversified of any upon the American continent, and is surpassed by that of but few countries in any portion of the earth. The sum of the values of these varied interests makes the State still, as it long has been, the foremost of the sisterhood in agricultural production. Extending from the Atlantic ocean to the Great Lakes, with an unusual range in elevations from its sea level to its extended valleys, its broad table lands and high mountain slopes, with great differences in exposures, and with an unusual variety of geological formations and consequent diversity of soils, the State is fitted for growing almost every crop and every variety of fruit found anywhere within the earth's temperate zone, while every domestic animal of special value to mankind can be reared within her borders and fitted for its greatest possible usefulness.

This diversity made the work of securing an adequate representation at the exposition one of peculiar difficulty. The difficulty was increased by the fact that our farmers could have but little personal interest in the State's exhibit as compared with that of their brethren in the western States where the attraction of emigration is considered of such great importance. New settlers are not looked for here, and the value of our lands is not so much dependent on such influences. The results achieved at such comparatively moderate expense have shown that the public spirit of our people accomplishes more than do the considerations of personal gain.

The means employed for securing exhibits were various. Individuals whose crops of products were known to have special value were addressed by letter, the officers of the county agricultural societies were asked to co-operate, and many of the prize exhibits at the county fairs were secured, while Col. Bowen personally visited many of the most important districts of the State. All the exhibits obtained were forwarded by express to a commodious warehouse in the city of Rochester, where each was carefully inspected, and such as had no special merit were returned to their senders, while all that were approved were thoroughly cleaned and fitted for exhibition. This was a laborious matter, requiring much skill and special care accurately to preserve identity and to prevent any mixing. This work was satisfactorily done by Col. Bowen and his assistants.

In collecting exhibits it was deemed of great importance to obtain every item of information concerning each that any intelligent investigator could desire. A mere display is of very little consequence. The educational value of an exhibit mainly determines its importance. With this object in view it was ascertained, often with great labor, the kind and character of soil upon which the crops were grown, the date of planting, the method of cultivation, date of harvesting and yield per acre, with the weight per bushel, together with the elevation of the locality, the average annual temperature, the average rain-fall, the average snow-fall, and whether the crop was produced by irrigation. The secretary of the bureau worked out much of the meteorological information from the voluminous reports made to State institutions and to the general government.

In preparing for the display of the exhibits at the Exposition it was considered of the first importance to so present every exhibit that its individual merits could be readily seen and thoroughly examined. The temptation of seeking for massed effects was avoided and show-cases of original design were constructed of polished oak and clear glass, while the grains were shown in boxes with plate glass sides so as to let each kernel and berry be seen in its true proportions without the distortion invariably produced by glass in bottles or in any tubular form. These cases and boxes proved to be most satisfactory for the purposes desired.

The collected exhibit of grains, grasses and grass seeds was sent to Chicago in one shipment from Rochester by the middle of March, 1893. The show-cases were speedily put in place and the exhibits installed as rapidly as was consistent with accuracy and careful classification. The work was completed and the whole display ready for inspection by May first, the date announced for the opening of the Exposition. It is believed that this was the only State or National exhibit in the Agricultural Building that was in perfect order by the appointed time.

In addition to the wide range of exhibits in grain, grass seeds, field peas and beans, it is proper to make special mention of a very complete and valuable collection of the grasses of the State, admirably prepared by Daniel Batcheler of Utica. Besides the specimens of grass in suitable bunches, the seed of each variety was shown attached to white card-board by transparent glue, furnishing every facility for

the careful study of each of the great number of varieties shown. Another valuable collection of grasses was contributed by Peter Henderson & Co., from their farm in Rockland county. Mention should also be made of the fine collection of samples of maple and sorghum syrups and sugars, illustrating an important interest in several portions of the State. The tobacco growers of the Onondaga district prepared a most creditable display, and the pressed contents of one of their large cases was admirably shown in a glass case constructed specially for the purpose. An interesting exhibit of flax and flax products was made showing the complete plant as grown in the field and during every stage of treatment and manufacture up to the beautiful household goods formerly so extensively made in the farm houses of the State. A fine display of hops was made from the central portions of the State. A detailed list of individual exhibits will be found elsewhere, but a special mention should be made of the collection of the soils of the State made by the officers of the Experiment Station at Geneva, whose director, Dr. Peter Collier, in this exhibit and in numerous other ways, added to the value of the State's display.

The completed exhibit comprised 120 samples of oats, 172 samples of wheat, 113 samples of rye, 114 samples of barley, 208 ears of corn, 154 samples of shelled barley, 97 samples of beans, 19 samples of peas, 12 samples of flax seed, 88 samples of nuts, 108 samples of grasses, 53 samples of grass seed in bulk, 8 ginseng roots, 1 sample of teasels, 5 samples of broom corn, 7 samples of maple sugar, 7 samples of maple syrup, 6 samples of sorghum syrup, 1 sample of sorghum sugar, 1 sample of amber cane, 19 samples of soils.

There were also shown twelve admirable photographs of large size, illustrating the cultivation and gathering of hops. Another interesting collection of phothographs showed the buildings and grounds of the Geneva Experiment Station. Every exhibit had plainly placed upon it a clearly printed card giving the full information already mentioned.

## THE WOOL EXHIBIT.

The State's wool exhibit was entirely complete, comprising a fleece of an aged ram and a yearling ram, an aged ewe and a yearling ewe of every pure breed in the State. These fleeces represented all the families of Merinos bred for fineness, for length of staple or weight of fleece, all the Down breeds and all the long wool breeds. It might have been enlarged by duplication, but its value as an exhibit would not have been at all increased thereby. Another interesting and important feature of the exhibit was a complete collection of the wools of the State, arranged in commercial grades. This was prepared by the MacNaughton Company of New York city.

It was a matter of regret that the cases in which wool was shown were furnished by the Department of Agriculture under a contract, in the making of which exhibitors had no voice. These cases were very poorly adapted to the purpose for which they were used and showed their contents very unsatisfactorily. At the close of the exposition a number of the fleeces were stolen from the cases. This was the only loss of the kind sustained by any department of the State's exhibit.

## THE POTATO EXHIBIT.

The potato crop is an exceedingly important one in our State, and it was deemed desirable to illustrate it by a display commensurate with its importance. The arrangements for this were placed in the charge of M. F. Pierson of Seneca Castle, and the excellence of his work was shown by the extent, high quality and great interest of the display, made in September. The exhibit was limited to 100 varieties of greatest excellence and was mainly confined to the ten leading market varieties grown in the chief potato districts of the State. The specimens were grown under contract in widely separated localities so as to ensure, in one place or another, the conditions that would be favorable for both yield and quality. This distribution of growth proved very advantageous.

The space for showing the potatoes was rather cramped, but the display was a very fine one and attracted much attention. The most complete information was given with every specimen exibited. Sales for seed, etc., were made to the amount of $130.69.

AGRICULTURAL EXHIBIT, WEST SECTION

# CATALOGUE OF NEW YORK EXHIBITS IN DEPARTMENT A, AGRICULTURE.

## COLLECTIVE EXHIBIT.

GROUPS 1 AND 5. — CEREALS, GRASSES AND MISCELLANEOUS FARM PRODUCTS.

Ackley, H. C., Hubbardsville; wheat.
Acre, V. A., Shelby Centre; wheat.
Ainsburger, Taylor, Hopewell Centre; oats.
Aldrich, Charles H., Mattituck; oats.
Aldridge, A. G., Victor; corn, beans, oats, wheat, rye, buckwheat.
Allen, Thos., Chippewa Bay; wheat, flax.
Allis, Clark, Medina; oats.
Allis, E. E., Barre Centre; peas.
Amos, Benj., Millville; barley, oats.
Andrews, John A., Knowlesville; wheat.
Andrews, Joseph, Ithaca; barley.
Andrews, Wm., Bristol; barley.
Ansley, Mark, Seneca Castle; corn.
Ansley, Frank S., Billsborough; beans.
Archer, W. G., Clifton Springs; beans, corn.
Austin, Ira, Lowville; wheat, oats.
Axtell, H. & F., Knowlesville; wheat, corn.
Babcock & Burch, Brookfield; corn.
Bacon, T. A., Medina; wheat.
Bagerly, B. W., Clifton Springs; wheat, barley.
Baker, J. O., Aurelius; wheat.
Baker, J. H., Aurelius; barley.
Baker, A. D., Aurelius; oats and corn.
Baldwin, L. M., Canandaigua; wheat.
Balliett, N. F., McDougals; wheat.
Balliett, E. C., McDougals; wheat, beans, corn.
Barclay, Almer, Lyons; barley.
Barker, T. W., Clifton Springs; wheat, oats.
Barnes, William D., Middle Hope; corn.
Bartlett, A. J., Kendia; wheat.
Batchelor, Dan'l, Utica; grasses.
Bates, Geo., Cambria; corn.
Beaver, Harry, Lyndonville; wheat.
Beck, S., Lakeville; oats.
Bellinger, J. G., Herkimer; wheat.
Bennett, A., Medina; wheat, oats.
Bergeman, G., Yates; peas.
Berryman, J. A., Geneva; oats, corn.
Bigelow, Geo., Belleville; barley.
Black, W. F., Billsborough: wheat, barley, corn.
Blanchard, Flint, Jamestown; wheat, rye.
Blanchard, Geo., Lyndonville; peas.
Blumenstock, J., Buel; corn.
Bonnell, Geo. A., Waterloo; corn, oats.
Bonnell, H. S., Waterloo; beans, buckwheat, wheat, barley, corn.
Bowen, H. S., Newport; corn.
Boyce, E. W., Schoharie; wheat.
Boyce, W. F., Knowlesville; oats.
Bradley, J. D., Lyons; barley.
Brewer, Edgar, Enfield Center; oats.
Briglyn, Edward, Orleans; corn.
Brown, R. R., & Son, Carlton; peas.
Brown, E. C., Rochester; beans, barley, oats.
Brown, John, Warsaw; oats.
Brumaghim, A., Fonda; broom corn.
Brundage, A. C., Bath; wheat.
Bryan, Geo., Savona; corn.
Buchan, W. S., Hopewell Center; oats, corn.
Budd, Geo., Enfield Falls; barley, corn.
Burch, J., Medina; wheat, barley, oats.
Burch, Philo, Carlyon; beans.
Burroughs. Alden, Leon; wheat.
Callman, John, Hopewell Centre; corn.
Callman, J. M., Caledonia; corn.
Camenga, J. D., Brookfield; corn.
Cammett, S. H., Hopewell; buckwheat.
Campbell, Cullen, Tallman; oats.
Carman, John, Porterville; oats.
Carpenter, C. E., Dundee; corn.
Case, Seward W., Orleans; wheat, corn, oats.
Chamberlayne, Geo., Southport; corn.
Chanham, James, Knowlesville; peas.
Chapin, Willard, Castile; barley, corn, oats.
Chapman, P. B., Chapinsville; wheat, oats.
Childs, W. E., Seneca Castle; barley, oats, beans.
Church, Perry, Millville; wheat, oats.
Clark, A. Mead, Bedford; wheat.
Clark, C. E., Rushville; wheat.
Clark, Daniel, Lyndonville; corn.
Clark, John, Bedford; oats.
Clark, Luther, Trumbull Corners; beans.

Clark, W. P., Waddington; corn.
Clark, W. P., Washingtonville; oats, corn.
Clark, V. W., West Bethany; barley.
Clarke, Geo. S., Milton; corn.
Cochran, Peter, Medina; wheat, barley.
Collins, Charlotte, Victor; oats.
Connell, Frank, De Ruyter; corn.
Conover, Edwin. Carlyon; beans.
Cook, H. C., Dundee; wheat, buckwheat.
Cook, W. E., Flint; oats.
Coolidge, Chas., Phelps; rye, oats, beans, corn.
Coon, Alex., Medina; wheat, beans.
Coon, Wm., Penn Yan; wheat.
Coon, U. G., Medina; wheat, barley, oats.
Cornish, Hiram, Newfield; wheat.
Corwin, O., Phelps; oats.
Corey, Mrs. Amelia, West Fayette; barley.
Cossitt, Davis, Onondaga; wheat, barley.
Crosier, Adam, Stanley; barley.
Cumming, Arthur, Cuylerville; oats, peas, beans, corn.
Cummings, Peter, Schoharie; corn.
Curtis, George M., Gates ; wheat.
Danolds, A. A., Medina; barley, oats
Davis, Robert O., Ballston; wheat.
Davison, G. H., Millbrook; corn.
Dayton, Josiah, East Hampden; wheat, corn.
Decker, Geo. W., Monticello; corn.
Densmore, Thomas, Flint; buckwheat.
Deual, Stephen T., Little Rest; oats.
De Rider, J. S., Charlton; oats.
Deyo, L. E., Clinton Dale; corn.
Didama, J. E., Medina; wheat.
Diefendorf, W. W., Fort Plain; corn.
Donald, A., Horseheads; grasses.
Doody, J. C., Medina; wheat, barley, beans.
Dorf, George, Elba; oats.
Dorman W., Billsborough; corn.
Drus, Edward, Spencerport; beans.
Duncan, A., Owego; buckwheat.
Eastman, C. F., Woodville; corn.
Elderkin, S. H., Cooperstown; corn.
Eldridge, A. J., Leon; corn.
Eldridge, William, Angelica; corn.
Elwell, W. G., Reed's Corners; wheat.
Erving, George, Sodus Point; nuts.
Espensheid, U., Sodus; barley.
Ferguson, Edward, Orleans; barley, corn.
Ferguson, R. B., Orleans; corn.
Ferguson, Samuel, Orleans; oats.
Ferguson, Sumner, Orleans; corn.
Finnegan, T., Brookfield; barley.
Fish, J. F., Waterloo; wheat, oats.
Fisher, Albert, Ithaca; corn.
Fisher, George, Hendy Creek; rye.
Fisher, H. W., South Bloomfield; flax.
Fisher, J. C., Ridgeway; wheat, oats.
Fisher, R. G., Millers; corn.
Fisher, W. H., Delhi; wheat, oats. corn.
Flagler, Fred R., Mechanicville; oats.
Fletcher, James H., Waterport; peas, beans.
Florey, Cubit, Shelby Centre; peas.
Folts, W. P., Herkimer; wheat.
Ford, S., Elba; wheat.
Fosbinder, Charles F., Medina; wheat, oats.
Fox, David, Suffern; wheat.
Fox, William, Medina; wheat, oats.
Fox, William, Clifton Springs; wheat, barley, corn, oats.
Frear, Alex., Ithaca; wheat, corn.
Frisbie, Osmond, Westport; barley.
Fuller, George H., Medina; oats, beans, corn.
Fuller, H. B., Lyndonville; peas, oats.
Fuller, Myron, Medina; wheat, barley, oats, corn.
Galusha, Geo., Orleans; corn.
Gage, Edwin L., De Ruyter; wheat, oats.
Gardner, J., Lyons; barley.
Genung, Jarvis, Ithaca; wheat.
Gillett, A. M., Knowlesville; peas.
Gillett, Willis A., Medina; wheat.
Gillett, E. M., Oak Orchard; beans.
Gotts, Albert G., Medina; wheat, oats, beans, barley.
Gould, H. D., Yates; beans.
Grant, Allen, Danby; buckwheat, oats.
Gray, C. W., Rochester; peas.
Gray, Fred., Jeddo; wheat, oats, beans.
Gray, Geo., Millville; wheat, barley.
Gray, John H., Millville; barley.
Gray, James H., Lima; wheat.
Gregory, Chas. P., Geneva; wheat, barley, peas, oats, corn.
Greene, Wm., Mt. Kisco; corn.
Griffin, Edward, Owego; corn.
Griffin, Wm. J , Broadalbin; oats.
Griffis, J. M., Adamsville; buckwheat.
Griffith, B. F., Wyoming; wheat.
Grimes, Wm., Oak Orchard; peas.
Grinell, W. H., Pierrepont Manor; rye.
Grinnell, A. D., East Shelby; barley.
Haight, Clark, Oak Summit; barley.
Hall, P. A., Seneca Castle; corn.
Ham, Henry, Lyndonville; wheat, corn
Hamilton, Wm., Caledonia; wheat, barley.
Hamilton, Wm. V., Caledonia; barley.
Harmon, John, Chatham; flax.
Harmon, Phœbe, Red Rock; flax.
Harte, Geo., Spencerport; oats, corn.
Hartman, Warren, Kingsbury; barley.
Hasbroack, Hiram, Lloyd; rye.
Haslett, Edwin, Seneca; oats, barley.
Havens, John S., Patchogue; wheat, corn.
Haverling, Geo. S., Bath; corn.
Haviland & Hull, Glens Falls; buck wheat.
Haviland, Peram, Glens Falls; corn.

Haviland, W. J., Glens Falls; rye, oats, corn.
Hawley, M. L., Lyndonville; wheat, beans, corn, oats.
Heath, Eugene, Shortsville; oats.
Hedges, Abram E., East Hampton; corn.
Hedges, Wm. A., East Hampton; oats.
Hemstreet, Amos, Charleston Four Corners; buckwheat.
Henry, Geo., Chapinsville; corn.
Hibbard, C. M., Sprout Brook; wheat, oats, beans, corn.
Hill, A. L., Knowlesville; wheat, barley, oats.
Hill, Ed. S., Peruville; buckwheat.
Hill, H. C., Clifton Springs; beans.
Hill, Kate B., Medina; wheat, barley, beans, oats.
Hill, S. S., & Son, Knowlesville; wheat, peas, oats.
Hisert, Geo., Mohawk; corn.
Hoag, J. E., Easton; corn.
Hocroff, R. M., Hopewell; wheat, corn.
Hogan, Clarence, Waterloo; wheat, oats.
Holland, James, Seneca Castle; corn.
Hopkins, F. B., Bath; corn.
Hopkins, F. E., Millville; wheat, barley.
Hopkins, Geo., Ithaca; corn.
Horn, Henry, Lyons; wheat.
Horning, A., Phelps; wheat.
Howard, J. E., Canandaigua; beans.
Howard, W. A., Albion; barley.
Howarth, Edward, Lockport; Alsike clover.
Howe, D. C., Weedsport; corn.
Howell, S. D., Millville; wheat, beans, barley, oats, corn.
Howell & Sears, Blooming Grove; wheat.
Howland, John, Gloversville; rye, oats, corn, buckwheat.
Hutchinson, A., Gaines; beans.
Isham, W. B., New York city; rye, oats.
Ives, F. O., South Easton; corn.
James, A. D., Knowlesville; peas.
Johnson, Erastus, Spring Valley; oats.
Johnson, Seymour P., East Schuyler; beans.
Jolly, Isaac, West Fayette; wheat, barley, corn, seed.
Jones, John W., Elmira; wheat, rye.
Jones, Prosser, Seneca Castle; buckwheat.
Jones, R. H., Clifton Springs; oats.
Keefe, C., Shelby Centre; beans.
Kennedy, C. B., Belleville; barley.
King, H. W., Orleans; barley.
King, T. H., Trumansburgh; corn.
Kingsford, Thomas, & Son, Oswego; wheat, barley, rye, corn.
Knapp, A. N., Seneca Castle; corn.
Knapp, Silas, Middleport; corn.
Kosky, Stephen, Ithaca; wheat, beans.
Kress, Edward, Spencerport; beans.
Lake, John W., Medina; wheat.
Laub, D. A., Waterloo; wheat, barley, corn.
La Monte, C. M., Owego; wheat, oats.
Lanning, John W., Ithaca; corn, oats.
Larrison, J. J., Blodget's Mills; beans, oats, corn, buckwheat.
Lasher, Nelson, Broadalbin; corn.
Leach, A., Lyons; barley.
Lee, C. L., Ellisburgh; wheat, oats.
Lee, F. L., Ellisburgh; corn.
Lee, Eugene, Ellisburgh; rye, oats.
Lee, Ora, Millville; beans.
Lee, R. M., South Bloomfield; corn.
Leonard, Chas., Shelby Centre; wheat, barley, oats, beans.
Leuthersich, David, Caledonia; corn.
Leutz, Wm., Lockport; wheat.
L'Hommiedieu, W. L., Medina; barley, corn, oats.
Lincoln, O. M., Newark; barley.
Lindke, W., Shelby Centre; wheat, oats.
Link, W. H., Reeds Corners; corn.
Little, Malcom, Malcome; syrup.
Lobbett, J. J., North Ridgeway; wheat, oats.
Longwell, Carver; Bradford; corn.
Loveland, Albert, Albion; corn.
Low, Manford, Leon; oats.
Lowman, F. C., Nichols; corn.
Luttenton, J. H., East Carlton; rye, corn, beans, buckwheat.
McAvoy, J. Mc., Medina; barley.
McBain, A. D., Brockport; beans.
McCann, John, Elmira; oats, corn.
McCann, James D., Elmira; beans.
McCarty, Milan, Throopville; corn.
McCarger, P. R., Shelby Centre; wheat, barley.
McCawley, Miss M., Clifton Springs; wheat.
McClure, J. O., Warsaw; corn.
McCollough, Andrew, Monticello; buckwheat.
McCormick, Adelbert, Medina; wheat.
McHenry, G. P., South Port; tobacco.
McGrain, D., McDougals; corn.
McKeel, Isaac, Poplar Ridge; syrup.
McMillen, James, Fairport; syrup.
McNall, W. C., Albion; wheat, corn, beans.
McPherson, D., Caledonia; corn.
McVean, J. J., Johnstown; rye, oats, corn.
Mack, J. W., Albion; wheat, corn.
Mackey, D. D., Highland; wheat, oats, corn.
Marsh, David, Cuylerville; corn.
Marshall, B., Waterloo; wheat, barley, oats.
Mason, Franklin, De Ruyter; oats.
Maynard, Mrs. O. E., Waterloo; corn.
Miller, E. D., Millers; buckwheat.
Miller, Harmon, Lyons; wheat, corn.
Miller, James, Penn Yan; wheat.
Miller, John W., Palatine Bridge; rye.

Minser, Richard, Suffern; buckwheat, rye.
Mitchell, Frank, Ithaca; buckwheat.
Mix, Chas. N., Albion; corn.
Moak, Wm., Lyons; barley.
Moore, J. S., Medina; wheat, peas, oats.
Moore, Reuben, Chatham; rye, oats, corn.
Morgan, Geo., Easton; corn.
Morse, Edward H., Canandaigua; barley.
Murdock, Fred., Medina; barley.
Murphy, Arthur, Seneca Castle; corn.
Nellis, John W., Palatine Bridge; rye, corn.
Newcomb, A. J., Flint; corn.
Newell, E. S., De Ruyter; oats.
Newell, Rodger, Huron; barley.
Newland, Will., Orleans; oats.
Newman, Wm. O., Ithaca; corn.
Newton, John, Hopewell Centre; wheat, barley, corn.
Nichols, Scott, Adamsville; rye, corn.
Nichols, Peter F., Lewis; rye.
Norris, A. H., Morganville; barley.
Nuteaway, Robert, Schoharie; rye.
Ontario County Exhibit; peas.
Orleans County Exhibit; peas, beans, corn.
Oxner, J. S., New Haven; corn.
Paine, E. C., Albion; corn.
Paine, John, Geneva; beans.
Paine, John, Greece; wheat, barley, beans, oats.
Paine, F. W., Albion; beans.
Parker, T. F., Clifton Springs; oats.
Payne, George, Billsborough; wheat, beans.
Pearson, Albert, Gorham; wheat.
Pease, William B., Lockport; wheat, barley, oats, corn.
Peck, A. J., Medina; wheat, oats.
Pelton Bros., Monticello; oats.
Pelton, P. R., Monticello; rye.
Pendry, Wm. H., Albion; wheat, oats.
Perry, R. M., Medina; wheat.
Pettit, Henry, Medina; wheat, oats.
Pickett, Daniel, Millville; wheat, barley, oats, corn, beans.
Pierce, Romanzo, Lyndonville; oats.
Pierson, M. F., Seneca Castle; wheat, buckwheat, corn, beans, oats.
Pomeroy, Norman, Lockport; buckwheat, beans.
Pratt, L., County Line; beans.
Pratt, W. W., Ridgeway; wheat.
Preston, E., Pittsford; oats, beans, peas.
Printof, Chief, Sanborn; corn.
Quinn, E. R., Waterloo; buckwheat, corn.
Raymond, E. A., Bedford; rye.
Reed, M. B., Medina; oats.
Reed, N. T., Lowville; corn.
Reid, Joseph, Millville; wheat.
Reissugue, J., Blaine; corn.
Reissugue, J., North Ridgeway; buckwheat.
Reissugue, R., Millers; peas.
Reynolds, Hiram, Medina, wheat.
Rhoades, Cyrus R., Leon; buckwheat.
Rhodes, Loreuzo, Hindsburg; wheat.
Roberts, D. L., Royalton Centre; beans.
Robinson, H. M., Cortland; barley.
Roe, Austin, Patchogue; corn.
Rogers, Geo. P., Barre Centre; wheat, barley.
Ross, Wm. F., Knowlesville; wheat, beans.
Rowley, A. P., South Cortland; corn.
Rowley, Geo. W., Saratoga Springs; corn.
Ruelson, W. S., Clifton Springs; wheat.
Russell & Birkett, Penn Yan; wheat, barley.
Ryan, James, Shelby Centre; wheat.
Safford, Chas. H., Argyle; corn.
Salisbury, Chas. F., Orleans; barley, peas.
Sanders, J. P., Bristol Springs; wheat, peas.
Sanford, D., Gaines; wheat.
Sanford, L. A., Gaines; wheat, corn.
Sargent, A. J., Waterport; wheat.
Sayles, L. L., Malone; wheat, barley, oats and corn.
Scegwald, H. H., Clifton Springs; oats.
Scott, F. D., Medina; oats.
Scott, John L., Geneseo; wheat.
Searing, Wm. F., Sherwood; corn.
Seeber, H. C., Marshville; wheat.
Seeley, R. F., Waterloo; buckwheat, corn.
Seiber, John W., Canajoharie; barley, buckwheat.
Shearer, A., South Cortland; rye.
Sherman, Frank, Westport; oats.
Shearman, Lewis and Dwelle, Penn Yan; barley.
Sherwood, John, Medina; barley, wheat.
Shisler, A. J., Medina; wheat, oats.
Sholtes, C., Schoharie; corn.
Signor, Burdette, Danby; oats.
Simpkins, Irving, Medina; wheat, beans, oats.
Sims & Tinkham, Akron; barley.
Smith, D. H., Middleport; oats.
Smith, Geo. R., North Ridge; wheat.
Smith, John H., Medina; wheat, oats.
Smith, Moses, Hallsville; corn.
Smith, Oren, Angelica; wheat.
Smith, R. B., Cortland; wheat.
Smith, S. J., Manchester; wheat.
Smith, Thos., Henrietta; wheat.
Smith, W. A., Cooperstown; buckwheat.
Smith, W. & T., Geneva; rye.
Snyder, D. E., Newark; barley.
Spangle, W. J., Hopewell Centre; oats.
Spencer, Lilly M., Highland; oats.

AGRICULTURAL EXHIBIT, EAST SECTION

Staley, Chas., Sharon Springs; buckwheat, oats.
Stanbro, Wm., Jr., Brookfield; oats.
Starr, H. M., Medina; peas.
Steere, Amelia B., Cooperstown; nuts.
Steugel, John G., McDougals; corn.
Stephens, L. H., Lowville; oats.
Stewart, Alex. B., Ballston Center; rye.
Stillman, D. B., Brookfield; corn.
Stone, John R., West Fayette; oats, corn.
Squires, J. C., Seneca; buckwheat.
Sutton, Chas., Shortsville; rye, oats.
Swan, Claude, Phelps; wheat.
Tallman, O. B., Seneca Castle; oats.
Tallman, T. B., Seneca Castle; oats, corn.
Tanner, Edwin, Warsaw; corn.
Tanner, Wm. A., Medina; oats.
Taylor, H. R., Clifton Springs; corn.
Taylor, Marvin, Argyle; wheat, oats.
Teeter, Andrew J., Ithaca; wheat, oats.
Tennant, E. M., Willett; oats.
Thompson, E. N., Meredith; rye.
Thompson, G. S., Amenia; corn.
Thorn, Henry, Lyndonville; wheat.
Thorn, John W., Highland; buckwheat, corn.
Tilbury, Herman, Owego; rye.
Tillson, Oliver J., Highland; rye, buckwheat.
Timmerman, Anna G., Medina; barley.
Tinkham, Morris, East Shelby; beans.
Tapper, C., Holley; beans.
Townsend, O. K., Ithaca; beans, oats.
Townsend, L. M., Lodi; wheat, oats, corn.
Treichler, E. J., Sanborn; wheat, corn.
Trickey, Rhodes, Bristol Springs; peas, oats.
Turner, Saml., Lyndonville; wheat, beans, oats.
Tuttle, Chas. W., Clockville; wheat, barley, rye.
Updyke, C., West Fayette; oats.
Van Horne, M. A., Cooperstown; oats.
Van Horne, Wm., Middleport; corn.
Van Sickles, G., McDougals; oats.
Van Wagener, Jared, Lawyersville; oats.
Van Wie, Dan'l, Palatine Bridge; rye, corn, buckwheat.
Van Wie, Wm., Canajoharie; corn
Vincomb, A. J., Flint; corn.
Vosburgh, C. L., Geneva; corn.
Wadsworth, W. A., Chapinville; beans.
Wait, Elmer, Easton; corn.
Walker, T. W., Angelica; oats.
Waterbury, A. B., Lyndonville; peas.
Wattles, Harry J., Lisle; oats.
Wayne, W. P., Orleans; corn.
Webster, J. D. & Son, Medina; oats, beans.
Webster, Lester, Flint; wheat.
Weed, James, Ballston Springs; corn.
Weld, John, Lyndonville; wheat.
Weld, J. M., Medina; wheat.
Wheeler, George A., South Bloomfield; wheat, barley.
Wheeler, Horace, Fayetteville; barley.
Wheeler, Jesse A., South Bloomfield; corn.
Whipple, William, Medina; wheat, oats, corn.
Whitaker, William E., Knowlesville; barley.
White, Nathan, Mt. Kisco; corn.
Whitney, C. P., Orleans; oats.
Whitney, J. H., Millville; barley, peas.
Whittleton, J. H., Medina; oats, beans.
Wilcox, Amos, Jamestown; corn, oats.
Wilcox, Jones, East Chatham; corn.
Wilkie, C. W., Flint; oats, beans.
Williams, C. F., Middleport; corn.
Williams, D. E., Geneva; corn.
Wilson, A. N., Lyndonville; corn.
Wilson, A. W., Millville; corn.
Wilson, I. B., Bristol Springs; barley, peas.
Wilson, Oliver, Highland; rye.
Wilson, W. V., Medina; barley, beans.
Wood, James, Mt. Kisco; corn.
Wood, Lewis, Suffern; corn.
Wood, M W., Woodville; wheat.
Wood, S. T., Woodville; wheat.
Wooden, H. S., Geneva; corn.
Wooden, J. H., Waterloo; wheat, barley.
Woodruff, John, Wadham Mills; wheat.
Woodruff, John R., Westport; oats.
Wolverton, Peter, Canandaigua; barley, wheat.
Wright, Geo. K. & Son, North Ridge; wheat.
Wyman, Berry, Millville; wheat, barley.
Yarter, A., Sandy Hill; rye.
Yates Co. Agr'l Society, Penn Yan; wheat.
Yaxley, T. A., Ridgeway; peas.
Young, E. J., Elmira; wheat.
Young, Josiah, Tallman; corn.
Zeh, Stephen W., Schoharie; buckwheat.

GROUP 3, CLASS 26.—HONEY BEES AND HONEY.

See special report, pages 229–232.

## GROUP 4.— POTATOES.

The exhibit of potatoes was a special feature of the New York display, and was prepared under the supervision of Mr. M. F. Pierson, of Seneca Castle. All the known varieties of the State were planted in the spring of 1893, and a half barrel of each variety brought to the fair at the expense of the commission, during the months of September and October. About 250 varieties were shown, a number far exceeding the exhibit of any other State. The following is an alphabetical list of varieties on exhibition:

Arizona Wild; Adarandac; Albany Seedling; Alex. Prolific; American Giant; American Monarch; American Star; American Wonder; Anges; Arizona Wild.

Badger State; Baker's Seedling; Boley's Northern Spy; Beauty of Hebron; Ben. Harrison; Bermuda Rose; Bermuda White; Big Benefit; Bill; Bliss' Triumph; Blue Humboldt; Blue Victor; Black Dunmore; Blue Elephant or Victor; Blaine, James G.; Bonnell's Columbia; Bracey's Rising Sun; Bracey's Superior; Brownell's Best; Brownell's Winner; Buffalo Beauty; Burbank; Burpee's Extra Early; Burpee's Superior.

California Blue; Campbell's Early; Cayuga; Charles Downing; Charley Ross; Charter Oak; Chautauqua; Chenango; Chenango Blue; Chicago Market; Clark's No. 1; Columbia; Columbia Rose; Corliss; Crane's June Eating; Crane's Potentate; Cream City; Crown Jewel; Crown Point.

Dakota; Dakota Red; Dandy; Rural No. 2; Delaware; Duell's Seedling; Dewhort's Best; Dutton's Seedling.

Early Albino; Early Gem; Early Harvest; Early King; Early Maine; Early Market; Early Mayflower; Early Northern; Early Ohio; Early Puritan; Early Rochester; Early Rose; Early Snowflake; Early Standard; Early Sunrise; Early Vaughan; Early Walton; Early White Beauty; Early White Prize; Early Wisconsin; Early Xanthus; Empire State; Everett.

Farmer's Alliance; Fill Basket; Frankfort; Freeman; Fuller's Seedling.

General Garfield; General McClelland; Genesee Co. King; Grafenbury Giant; Green Mountain; Governor Foraker.

Halo of Dakota; Hampden Beauty; Harbinger; Holton Rose; Home Comfort; Humboldt; Hunt's Early.

Ideal; Irish Blush; Irish Blue; Iron Clad.

Jumbo; Jerry Peachblow.

Kings Co. Mammoth; King of Kings; King of the Roses.

Late Hebron; Late Rose; Layman (Rural No. 2); Lenore; Lewis' Favorite.

Maggie Murphy; Maine; Maine Rose; Manitoba; Manhattan; Manhattan Rose; Mahopac; Matchless; Milton's Late White; Minister; Miser; Molly Stark; Monroe Co. Prize; Monroe Seedling; Morgan; Morning Pride; Morning Star.

Napoleon; Negro; New Queen; New York Central; Nott's Victor.

Ohio; Ohio, Jr.; Ottawa Rose.

Paris Rose; Pat. Murphy; Pearl of Savoy; Pennoyer Prolific; Peoples; Perfection; Seedling, Nos. 101, 121, 131; Pierson's Eureka; Polaris; Powers of Beauty; Pride of America; Pride of California; Pride of Ireland; Puritan; Purple Trope.

Queen of the Roses; Queen of the Valley.

Red Ohio; Reeve's Rose; Robert Emmett; Rochester Rose; Rose Magnum-bonum; Rough Diamond; Rural Blush; Rural New Yorker No. 2.

Savoy; Seedling Nos. 1, 2, 3, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50; Seneca Beauty; Seneca Red Jacket; Signal, Silver Dollar; State of Maine; Steel's Red or Irish Cup; Storm King; Stray Beauty; Strong's Imperial; Stump the World; Superior; Summit; Sunlit Star.

Thunderbolt; Ton Hocks.

Uncle Sam.

Vanguard; Van Orman's Earliest; Vaughan; Vick's Champion; Vick's Late White; Vick's Perfection.

Wall's Orange; White Elephant; White Flower; White Rose; White Seedling; White Star; Wilson's First Choice; Wilson Rose; Wonder; Woodhull Seedling; Wood's Early; World's Fair; Workingman's Potato.

Xanthus.

Yosemite.

The above varieties were contributed by the following named exhibitors, each sending from five to forty varieties:

Bruse, H. G., Hoosick Falls.
Bracy, E. M., Ogdensburg.
Bonnel, Geo. A., Waterloo.
Baggerly, B. W., Clifton Springs.
Brace, J. A., Albion.
Billington, J. F., East Aurora.
Cloyes, A. G., Utica.
Chapman, C. E., Peruville.

Gascoigne, C. E., Lyons.
Hull, G. M., Merrifield.
Hurlbert, E., Trenton Falls.
Kennedy, B. F., Belleville.
Lewis, R. N., Red Hook.
Lewis, Sidney, Syracuse.
Loucks, Howard, Chittenango.
Marks, W. F., Chapinsville.
Pierson, M. F., Seneca Castle.
Preston, E., Pittsford.
Pearson, H. C., Pitcairn.
Qua, Frank, East Hartford.
Ryall, Benjamin, Saratoga Springs.
Roberts, W. H., Chateaugay.
Rupert's Sons, Seneca.
Slinn, Benjamin S., Spring Valley.
Titus, R. F., Westbury Station.
Wright, N. A., Oswego.

GROUP 7.— DAIRY PRODUCTS.

See special report, pages 232–239.

GROUP 8.— HOPS.

Downey Farm, Waterville; hops.
Hanover Farm, Waterville; hops.
Maxon, William, Waterville; hops.
McHenry, G. P., Southport; leaf tobacco.
Wilber, D. F., Oneonta; hops.

GROUP 9.

Boardwell, Aaron, Fargo; wool.
Case, Nathan, Hoosick Falls; wool.
Chick, John, Attica; wool.
Cossitt, Davis, Onondaga; wool.
Curry, William & Son, Hasbrouck; wool.
Earll, J., Horatio, Skaneateles; wool.
Fisher, Harland W., So. Bloomfield; flax.
Haines, Abram, Mt. Kisco; flax.
Haines, Joseph, Bedford Station; flax.
Ham, Henry, Lyndonville; flax seed.
Harmon, John S., Chatham; flax seed.
Harmon, Mrs. Phebe, Red Rock; flax seed.
Luggner, Mrs. Lea, Bedford; silk.
MacNaughton Co., New York; wool.
Osborne & Ladd, Victor; wool.
Ray, John P., Hemlock Lake; wool.
Warren, J. Hobart, Hoosick Falls; wool.
Wood, James, Mt. Kisco; wool.
Wylie, B. J., Marcellus; wool.

GROUP 14.

New York State; photographic views of hop fields and buildings, dairy farms, buildings, etc.

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## REPORT ON THE BEE AND HONEY EXHIBIT.

BY OREL L. HERSHISER, SUPERINTENDENT, BUFFALO.

The New York State Beekeepers' Association took action as early as January, 1891, with the view of securing an adequate apiarian exhibit at the Columbian Exposition. Mr. J. L. Scofield, of Chenango Bridge, and Mr. Orel L. Hershiser, of Buffalo, were appointed a committee to co-operate with any authority to which might be intrusted the duty of bringing out a comprehensive exhibit of the agricultural resources of the State. After the organization of the Board of General Managers, Mr. Hershiser was placed in charge of the apiarian department and instructed to use every effort to bring out such an exhibit of bees, honey, etc., as would demonstrate New York's superiority to any other State. Contributions were secured from fifty of the leading beekeepers and were fairly representative of the whole range of the industry.

The space allotted for the exhibit was occupied by two cases, each twenty-five feet long by four feet four inches wide and eleven feet high, two cases each ten feet long by four feet four inches wide, and one case sixteen feet long, five feet wide and eleven feet high. The last case was used for the exhibit of live bees. Samples of the crop of 1892 were collected in Buffalo during the months of January, February and March, 1893, and shipped thence to the fair. The exhibits of the crop of 1893 were in part collected in Buffalo, and in part shipped direct by the exhibitors. For the most part the specimens of the crop of 1892 were paid for out of the State appropriation; those of 1893 were lent by the individual exhibitors. The exhibit consisted of about 6,000 pounds of comb honey, 3,000 pounds of extracted honey, fruits preserved in honey, beeswax, the honey producing flora of the State, pastry made with honey sweetening, honey vinegar, metheglin, pickles made with honey vinegar, honey soap, honey cough syrup, salves and leather dressing made from the beeswax, several styles of beehives, so arranged as to illustrate the progress of apiculture from its primitive state, and all appliances used by progressive apiarists, including the honey extractor, wax extractor, bee smokers, bee escapes, swarm catchers, queen cages and queen excluders, new swarming devices and samples of comb foundation. Sixteen varieties of honey were shown, viz.: Linden or basswood, white clover, alsike clover, sweet clover, applebloom, raspberry, dandelion, golden-rod, aster, mustard, buckwheat, sumach, heartsease, locust, boneset and thistle.

The bee exhibit consisted of six hives of bees, comprising two colonies of leather-colored Italian bees, one of golden Italian bees, two of Carniolian bees, and one of common black bees. It was designed that the bee exhibit should be a practical demonstration of the methods of producing both comb and extracted honey, and accordingly openings in the wall of the building were made so that the bees might fly from and to their hives in the natural way. Inasmuch as the six hives of bees produced during the summer, under the most unfavorable circumstances, 252 pounds of honey, 112 pounds of which was in the comb, this part of the apiarian exhibit was successful beyond expectation. It was an easy matter to show the methods of bee-keeping, but the practical results were a surprise. Eleven awards were made to exhibitors in the New York apiarian department. This is nearly twice as many as were given to any other State.

GROUP 3.— HONEY.

Andrews, Miss E. E., Coventryville; comb honey.

Andrews, John, Patten's Mills; 3 nucleus colonies Carniolian bees.

Bailey, G. W., & Son, Ovid; extracted honey.

Berry, Mrs. M. L., Big Tree; wax sea shells made from bleached beeswax.

Bosworth, W. V., Clockville; comb honey, extracted honey.

Briggs, Edgar, Poughkeepsie; white clover comb honey; white clover extracted honey.

Coggshall, David, West Groton; comb honey, extracted honey.

Crosby, B. A., Sardinia; extracted honey.

Cyrenus, F. H., Oswego; designs and initials worked in comb honey by bees, two honey combs nearly four feet long and four inches thick.

Davis, Hiram H., Deansville; comb honey, extracted honey.

Dawns, Ira, Irona; extracted honey.

Dimick, Jay, Rices; comb honey.

Dodd, Charles F., Rushville; extracted honey.

HONEY EXHIBIT

Doolittle, G. M., Doridono; one colony golden Italian bees, two colonies leather-colored Italian bees.

Elwood, P. H., Starkville, extracted honey, white clover comb honey.

Fargo, Fred. H., Batavia; comb honey.

Faville, Mrs. C., Holland; extracted honey.

Faulkner, John G., Mumford; comb honey.

Ferris, C. G., Columbia; extracted honey.

Fish, Norman L., Indian Lake; raspberry extracted honey.

Garrett, Martin, Coeymans Hollow; extracted honey.

Greiner, Friedeman, Naples; comb honey.

Hawkins, N., Gowanda; comb honey.

Hazelton, Fred. P., Le Roy; comb honey.

Hallegas, C. A., De Kalb June.; white clover comb honey.

Hastings, M. E., New York Mills; white clover comb honey, white clover extracted honey; positive reversible honey extractor, Columbia honey extractor, wax extractors, six round feeders, three square feeders, three bee smokers, three perfection swarmers, one beehive, four supers for beehive, three escape boards, twelve bee escapes, one slatted honey board, samples of T tins, comb lifters.

Heath, Miss Satie I., Chittenango; comb honey.

Hetherington, J. E., Cherry Valley; extracted honey; white clover comb honey; buckwheat extracted honey, twenty years old, two old style straw hives, first exhibited at the Centennial 1876, two beehives old style, one emergency beehive.

Hershiser, Orel L., Buffalo; comb honey produced at the World's Fair, extracted honey produced at the World's Fair, practical apiary conducted at the World's Fair, including manipulation of frames and hives of bees, extracting honey and taking comb honey from hives by latest improved methods, appliances used in queen rearing, queen rearing practically demonstrated, peaches preserved in honey, old style Langstroth hive, aster extracted honey; boneset extracted honey; Heather of Scotland extracted honey.

Howell, E. D., New Hampton; sumach and heartsease extracted honey.

Hoffman, Julius, Canajoharie; white clover comb honey, buckwheat comb honey, white clover extracted honey; alsike extracted honey, buckwheat extracted honey, apple blossom extracted honey; pine apples preserved in honey, cherries preserved in honey, honey vinegar, pickles made from honey vinegar, metheglin, honey cough syrup, beeswax salve, honey soap, beeswax leather dressing, wax candles, flowers and leaves preserved with beeswax.

Hutchins, F. C., Massena Springs; white clover extracted honey.

Hutchinson, Edwin, East Avon; extracted honey.

Ivory, Helen L., Smithville; comb honey.

Kennel, Fay, Rochester; extracted honey.

Lamareux, George, North Hector; comb honey.

Langdon, H. P., East Constable; non-swarming device.

Lindsey, C. V., Attica; comb honey, 111 1-4 lbs. product of one hive in 1892, extracted honey, white clover comb honey, 107 lbs. product of one hive.

Makely, Wm. P., Medusa; extracted honey.

Miller, W. N., DeKalb; comb honey.

Munson, J. O., East Lansing; extracted honey, beeswax, straw hive, old style.

Park, Frank L., White Plains; sumach extracted honey.

Parker, C. L., Onondaga; white clover extracted honey.

New York State; commercial apiarian exhibit (comprising the exhibits of all the New York beekeepers).

Penton, Charles, East Aurora; honey vinegar.

Penton, Maggie, East Aurora; pressed specimens honey producing plants.

Phipps, F. A., Short Track; comb honey.

Reed, Lyman, West Winfield; extracted honey.

Rogers, H. J., Wellsville; comb honey, extracted honey.

Root, A. H., Canastota; extracted honey.

Saunders, Asa., Big Tree; 1 colony German black bees.

Scofield, I. L., Chenango Bridge; comb honey.

Sleeper, S. S., Holland; white clover comb honey; white clover extracted honey, and other varieties.

Snell, Albert, Clayton; linden comb honey, linden extracted honey.

Van Deusen, J., Sprout Brook; flat-bottomed comb foundations, frames of brood comb foundation, combs which the bees had worked on from seven to twelve hours, showing the work of bees from the inception of comb foundation to perfection of combs, old artificial tin honey-comb, Van Deusen clamps.

Wear, Robert A., Clayburgh; comb honey, extracted honey.

Winter, O. F., Winterton; locust extracted honey; blue thistle extracted honey.

Woolf, John, Big Tree; 1 colony German black bees.

Whitford, LeRoy, Stow; comb honey. The W. T. Falconer Mfg. Co., Jamestown; dove-tailed beehives, thin-walled beehives, Peet queen cage, Bingham smoker, bee veils, assortment honey knives, assortment bee feeders, Coggshall bee brush, 1,000 Falcon honey sections, Acme wax extractor, honey boards, all zinc honey boards, brood comb foundation, section comb foundation, Porter bee escapes, Hastings bee escapes, foundation cutter, Davis brushes, comb holder, comb bucket, Spar wire imbedder, Parker foundation fastener, Leach section folder and foundation fastener, perfect super put up with wood separators.

## REPORT ON THE DAIRY EXHIBIT.

BY JOSIAH SHULL, ILION, SUPERINTENDENT.

In October, 1892, the superintendent entered upon the active discharge of his duties as a result of a conference between the Board of General Managers and the committee from the State Dairymen's Association, consisting of W. H. Gilbert, A. R. Eastman and Josiah Shull. Means were taken to inform dairymen throughout the State as to the scope and character of the proposed exhibit and the facilities which the Board of Managers had provided for the transportation of butter and cheese to the exposition. The first exhibit of cheese was to be made in June, 1893, and it was determined that this should be of cheese made in 1892. On communicating with dairymen it was ascertained that most of the cheese made in 1892 had gone out of the hands of the makers. The June exhibit was consequently made in part of cheese procured directly from the maker and in part from storage in the city of New York.

The butter and cheese for the four several exhibits of June, July, September and October, 1893, were transported to Chicago in refrigerator cars by the American Express Company and the Wells, Fargo & Company Express. The express companies performed the service at the stated times and dates with promptness and dispatch, and delivered the products in good condition at the Dairy Building in Chicago. The several exhibits proved entirely satisfactory in numbers and commendable in standard and quality. There were 733 exhibits of butter, aggregating about 13,000 pounds, of which three-fourths was from private dairies and about one-fourth from creameries. While much of the dairy butter maintained a high standard, the creameries maintained a better average and more uniform high standing. One-fifth of all the butter exhibited was high grade, scoring from 95 to 100 points.

There were manufactured in New York factories in 1892 19,497,357 pounds of butter, which, from the best obtainable sources of information, represents about fourteen per cent of the total amount of butter manufactured in the State.

In the cheese department there were 564 samples of all varieties at the several exhibits, or a total of 33,000 pounds. The June exhibit contained 147 packages, all of cheese made in 1892, excepting some varieties of fancy cheese. The July, September and October exhibits

were of cheese of 1893 make, consisting of 417 packages, including fancy cheese, nearly one-half of which was of high grade, scoring from 95 to 100 points. The exhibits were in every respect representative of this great industry which, in 1892, produced 130,991,310 pounds in the factories of the State.

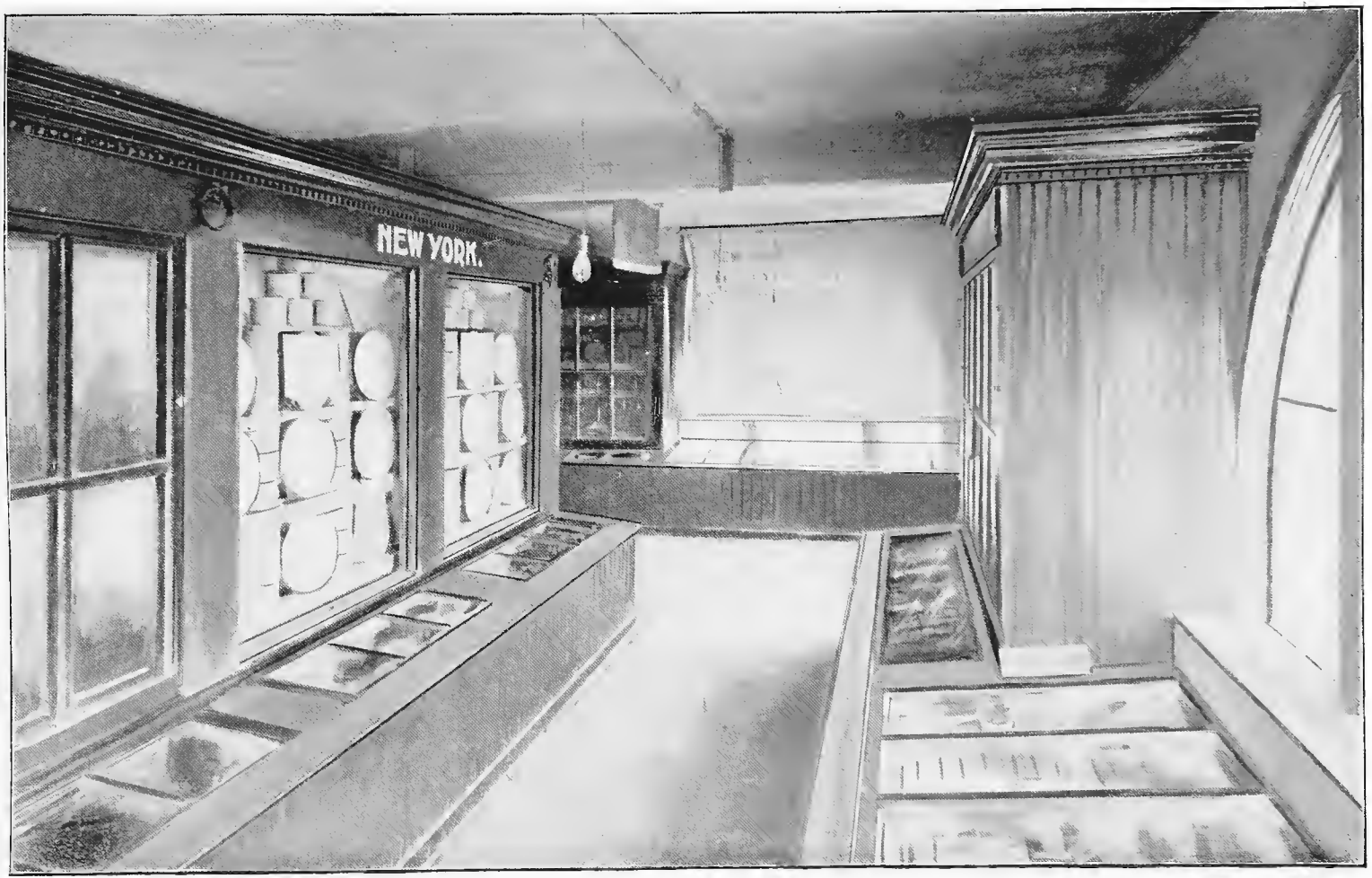
The object of this department was to make a dairy exhibit by dairymen of the State which should actually show the different varieties of cheese placed on the markets of the country. No discrimination was made as to who should or should not exhibit. Every dairyman in the State was invited to exhibit. No especial selection or inspection of the products was made prior to placing them on exhibition. It must be said, to the credit of the dairymen of the State, that after they became fully informed as to the object and workings of the display, they readily responded to the call for exhibits. It is gratifying to state that New York manufactures nearly every variety of cheese known to the markets, and maintains a standard equal to any other State.

The several exhibits were complete and full, equal to the capacity of space awarded to the State; and the quality of the products sustained our reputation as the leading dairy State in the Union.

GROUP 7.— EXHIBITS INSTALLED IN THE DAIRY BUILDING.

Abell, Emory D., Franklin; butter.
Acker, L. C., Ilion; butter.
Acker, Mrs. Nelson, Ilion; butter.
Ackley, J. D., Roxbury; cheese.
Alexander, W. A., Scipioville; butter.
Alger, Geo. S., Martinsburg; cheese.
Anderson, C., Delhi; butter.
Anderson, Wm., Jr., Delhi; butter.
Angell, J. S., New Berlin; butter.
Arbuckle, B. T., Delhi; butter.
Archibald, Jas. R., Margaretville; butter.
Archibald, R. H., Margaretville; butter.
Armstroug, F. C., Bovina Centre; butter.
Auken, Fred., Boonville; cheese.
Austin, Chas., Deer River; cheese.
Austin, Nichols & Co., New York; cheese.
Ayers & McKinney, Meredith; butter.
Ayres, E. E., Rice's; cheese.
Backus, F. H., Scriba; cheese.
Bailey, J., Charlotte Centre; cheese.
Bailey, Roscoe, So. Jefferson; butter.
Bailey, Jacob, Bovina Center; butter.
Bailey & Hallock, South Jefferson; butter.
Baird, John, Newport; cheese.
Baker, A. D., Aurelius; butter.
Baker, J. H., Aurelius; butter.
Baker, L. A., Aurelius; butter.
Baldwin, A. P., South Otselic; butter.
Barber & Minor, Oxford; cheese.
Barker, F. B., Camden; cheese.
Barnaskey, C. F., Pennellville; cheese.
Bartlett, G. L., Edwards; cheese.
Bartlett, S. G., Laona; cheese.
Bartlett, Willis C., Laona; cheese.
Bartlett, W. M., Franklin; butter
Beaver, Chas., Collins; cheese.
Beers, Chester, Walton; butter.
Belden, John, Moons; cheese.
Bell, E. R., Delhi; butter.
Bellows, James H., Sinclairville; cheese.
Benedict & Son, A. F., Delhi; butter.
Berry, John H., Sprague ville; cheese.
Beswick, J. E., Morley; butter.
Biggar, A. C., Pepacton; butter.
Bills, E. J., Delhi; butter.
Birdsall, E. H., Margaretville; butter.
Bishop, Wheeler O., Castile; butter.
Blakely, J. P., East Meredith; butter.
Bliss, J. A., Delhi; butter.
Bliven, Albert, Boonville; cheese.
Bloomhower, A. D., Mooers Forks; butter.
Blum, Albert, Leyden; cheese.
Boggs, Geo. A., Stamford; butter.
Boldof, Charles, Attica; cheese.
Borthwick, W. A., Delhi; butter.
Bostwick, Milton, Croton; butter.
Bouton, M. C., Margaretville; butter.
Boyd, B. S., Loomis; butter.
Boyd, Geo., Norwich; cheese.
Brett, James, McDonough; butter.
Brisco, Jos., Franklin; butter.
Bristol, Thomas, Margaretville; butter.
Bristow, James, Sinclairville; cheese.
Brooks, A., Owego; butter.
Brown, A. P., Fowler; cheese.
Brown Bros., Newport; butter.
Brown, C. C., Delhi; butter.
Brown, G. H., Andes; butter.
Brown, Hiram, Canton; butter.

Brown, J. P., East Meredith; butter.
Brown, M. R., Croton; butter.
Brown, Sidney, Edwards; cheese.
Bugbee, J. E., Centralia; cheese.
Burleigh, J. F., Vernon; cheese.
Burgung, M., Forestville; cheese.
Burr, Elbert, Margaretville; butter.
Burroughs, C., Roxbury; butter.
Cant, David, Croton; butter.
Carman, G. W., Mecklinburgh; butter.
Carpenter, Burt, Moons; cheese.
Carpenter, F. P., Kanona; butter.
Carpenter, H. M., Higginsville; cheese.
Carpenter, Zenas, East Randolph; cheese.
Case, C. M., Delhi; butter.
Casler, Charles, West Amboy; cheese.
Casler, J. R., Parish; cheese.
Cavin, A. & W. H., Delhi; butter.
Chamberlain, J. N., Kanona; butter.
Chambers, C. H., North Lawrence; butter.
Champlin, Giles S., Jr., Stamford; butter.
Champlin, J. Perry, Ruth; butter.
Chandler, H. G., & Son, Ogdensburg; butter.
Christian, F. N., Camden; cheese.
Church, F. W., Caughdenoy; cheese.
Clark, C. F., North Russell; cheese.
Clark, E. S., Norwich; butter.
Clark, F. L., Charlotte Center; cheese.
Clark, W. L., Andes; butter.
Clarke, N. E., Potsdam; cheese.
Cleland, O. M., Charlotte Center; cheese.
Clive, Robert, Delhi; butter.
Close, James, Arena; butter.
Close, Wm. J., Margaretville; butter.
Clun, H., East Meredith; butter.
Cold Brook Factory, Omar; cheese.
Cole, Jno., Margaretville; butter.
Cole W. C., Franklin; butter.
Collins, Frank, Ellington; cheese.
Collins Center Factory, Collins Center; cheese.
Collins Factory, Collins; cheese.
Conan, D. A., East Randolph; cheese.
Conner, Jas., East Meredith; butter.
Conner, George H., East Meredith; butter.
Conover, W. D., Leyden; cheese.
Conroy, J. P., Cedars; cheese.
Converse, H. J., Southville; butter.
Cook, A. & H. E., Denmark; butter.
Cook, C. B., Cazenovia; butter.
Coon, E. O., Mohawk; cheese.
Cooper, J. C., Theresa; cheese.
Cooper, W. H., Laona; cheese.
Cornell, Irving, Stamford; butter.
Cotton, A. S, Clifton Springs; butter.
Cottrell, H. M., Rhinecliff; butter.
Coulter, D. E., Andes; butter.
Countryman, A., Herkimer; cheese.
Countryman Factory, M. Getman, Mohawk; cheese.
Cowan, James A., Margaretville; butter.
Cowden, W. A., Attica; cheese.
Craft, Daniel, Stamford; butter.
Craft, F., Roxbury; butter.
Craig, John, Jr., Delhi; butter.
Craspen, E. S., Waddington; butter.
Cristman, Martin, Paine's Hollow; butter.
Cristman, O. B., Mohawk; cheese.
Cross, Corwin T., Charlotte Center; cheese.
Cune, A. B., Shavertown; butter.
Curd, I., Owego; butter.
Currie, James H., Delhi; butter.
Dales, Edmund, Hobart; butter.
Dales, M., Roxbury; butter.
Danforth, Mrs. G. W., Stamford; butter.
Dapson, T. H., Herkimer; cheese.
Davey, Albert, Minden; cheese.
Davis, D. R., East Steuben; cheese.
Davis, F. E., Delhi; butter.
Davis, F. W., North Jackson; butter.
Davis, H. W. & H. A., Andes; butter.
Davis, Nathan, East Randolph; cheese.
Davy, Wm. S., Andes; butter.
Day, Morris, Nicholville; butter.
De Garmo, A. E., Ilion; cheese.
Denny, J. H., Walton; butter.
Derns, M. L., Moira; butter.
De Silva, W. J., Margaretville; butter.
Dewey, L. L., Lawrenceville; butter.
Dewitt, Mrs. J. C., Bath; butter.
Dexter, J. W., Lycoming; cheese.
Dibble, Onslow, Franklin; butter.
Dickinson, B., So. Rutland; cheese.
Dodds, Wm., Delhi; butter.
Doughty, G., Brookton; butter.
Douglass, Geo. B., & Co., New York; cheese.
Drury, A. F., Canton; cheese.
Dryden, Geo. J., Copenhagen; cheese.
Dumond, W. F., Margaretville; butter.
Dunaway, F. P., East Rodman; cheese.
Dunn, A. T., Hobart; butter.
Dygert, A., Delhi; butter.
Dygert, Peter, Kanona; butter.
Eames, A. D., Solsville; cheese.
Easton, E. A., Roxbury; butter.
Easton, G. R., Lowville; cheese.
Eddy, A. S., McDonough; butter.
Edmunds, F. W., Sherman; cheese.
Edwards, F. W., Sherman; butter.
Effner, L. Dow, Jefferson; butter.
Eldred, Zenas, Bridgewater; cheese.
Elizabethtown Factory, Mohawk; cheese.
Elliott, H. C., Buckton; butter.
Empire Cheese Co., New Berlin; cheese.
Empire State Factory, Clayton; cheese.
Erickson, H., Thornton; cheese.
Erwin, Arthur J., Charlotte Center; cheese.
Erwin, B. G., Sinclairville; cheese.
Erwin, W. M., Charlotte Center; cheese.
Erwin, James, Sinclairville; cheese.
Erwin, D. W. C., Massena; butter.




DAIRY EXHIBIT

Evans, J. D., Attica; cheese.
Evans, Roland, Glendale; cheese.
Every, A., East Meredith; butter.
Every, Nehemiah, Delhi; butter.
Farmer Factory, De Pauville; cheese.
Farrell, James, Morristown; cheese.
Farrington, S. H., Delhi; butter.
Faulkner, Morris, Margaretville; butter.
Fenner, W. H., Southville; cheese.
Ferris, Geo. L., Atwaters; butter.
Finch, Thomas, Conkling Forks; butter.
Finch, Victor, Trout Creek; butter.
Finck, A., Delhi; butter.
Finkle, Isaac, Shavertown; butter.
Finster, J. E., Lacona; cheese.
Fisher, Geo. J., Delhi; butter.
Fisher, Geo. W., Franklin; butter.
Fisk, D., Owego; butter.
Fitch, F. H., N. Hammond; cheese.
Fitch, W. H., Lowville; cheese.
Fitzgerald, W. J., Newport; cheese.
Flaherty, M. H., Massena; cheese.
Fletcher, James, Andes; butter.
Forbes, R H., West Stockholm; butter.
Ford, C. A., Little Falls; cheese.
Ford, J. W., Fairfield; cheese.
Forrest, W. S., Delhi; butter.
Foster, John, Hermon; cheese.
Frank, Wilber, Franklin; butter.
Frazer, E. C., Stamford; butter.
Frisbee, L. R., East Meredith; butter.
Fuller, Clark, Sprague ville; cheese.
Gallup, G. J , Hobart; butter.
Garline, Seaman, Little Falls, butter, cheese.
Gates, F. H., & Son, Chittenango; butter.
Gaynor, Mrs. Maggie, East Martinsburgh; cheese.
George, Emil, Attica; cheese.
George, James D., Delhi; butter.
George, D. D. K., Andes; butter.
Gerber, John, New York; cheese.
Getry, Alex., Jordanville; cheese.
Gibbs, A. S., Stamford; butter.
Gibson, Mrs. F. F., Hobart; butter.
Gifford, N. A., East Masonville; cheese.
Gilbert, W. H., Richland; cheese.
Gillitt, Levi, Franklin; butter.
Gilly, H. H., West Pierrepont; cheese.
Gilson, Arthur, Canton; cheese.
Gladstone, E., Andes; butter.
Gladstone, J., Andes; butter.
Gladstone, R., Andes; butter.
Gleason, Henry, Charlotte Center; cheese.
Glendening, John C., Delhi; butter.
Goldsmith, John M., Franklin; butter.
Gooding, Henry B., Groton; butter.
Goodrich, D. A., South Champion; cheese.
Gould & Bacon, Evans' Mills; cheese.
Gove, A. E., Pamelia Four Corners; cheese.
Cowanda Factory, Collins; cheese.
Gowdy, F. C., West Martinsburgh; cheese.
Grant, Elmer, Stamford; cheese.
Grant, H. L., Rensselaer Falls; cheese.
Grant, R. P., Clayton; cheese.
Graves, B. M., Lowville; cheese.
Gray, E. A., S. Hammond; cheese.
Gray, S. P., Winthrop; butter.
Green, C. A., Warsaw; cheese.
Green, Fred, De Kalb Junction; cheese.
Green, H. J., Brier Hill; cheese.
Green, W. F., Sherman; cheese.
Gregory, S., Stamford; butter.
Gregory, Willard F., Stamford; butter.
Griffith, Wm. S., De Peyster; cheese.
Griswold, G. M., Oswego; butter.
Grove Spring Creamery Co., Big Flats; butter.
Gurnsy, James, Woodhull; butter.
Hall, Clarence L., Gouverneur; cheese.
Hall, S. A., Watertown; cheese.
Hambleton, W. H., De Wittville; cheese.
Hamilton, C. J., Stamford; butter.
Hanford, C. O., East Meredith; butter.
Hanford, D., Croton; butter.
Hanford, D. J., East Meredith; butter.
Hanna, W. J., Lisbon Centre; cheese.
Hardin, J. H., Delhi; butter.
Hardy, John C., Copenhagen; cheese.
Hardy, Oliver F., Buckton; butter.
Harper, Henry, Sinclairville; cheese.
Harper, T. A., Shumla; cheese.
Harrington, C. D., Plymouth; butter.
Harrington, Mrs. H. B., Castile; butter.
Harris, J. B., Antwerp; cheese.
Harter, H., Owego; butter.
Harter, Norman, Little Falls; cheese.
Harvey, Frank, South Stockton; cheese.
Hawley, E. T., Pittsford; butter.
Hawley, F. W., Pittsford; butter.
Hay, John, Ogdensburgh; cheese.
Hayden, C. L., Morristown; cheese
Haynes, E. M., Haynes; cheese.
Hendry, C. M., Stamford; butter.
Herley, Michael, Constableville; cheese.
Hess, R., Hobart; butter.
Hetherington, S., East Meredith; butter.
Hildreth, Frank G., Herkimer; butter.
Hill. H. H., West Pierrepont; cheese.
Hinkley, Edward, Roxbury; butter.
Holbert, John H., Chemung; butter.
Holden, J. R., Franklinville; cheese.
Holloway, E. A., Adams Centre; cheese.
Holmes, Thos., Lamont; butter.
Holms, Walter C., Pulaski; cheese.
Hotaling, John, Franklin; butter.
Horton, W. H., S. Stockton; cheese.
Howe, H. W., Madrid Springs; butter.
Howland, E. B., Walton; butter.
Howland, T. P. & O. L., Walton; butter.
Hubbard, O. A., Walton; butter.
Hulbert, Jno., Chenango; butter.
Hull, S., Shavertown; butter.
Hume, H. H., Delhi; butter.
Humphrey Bros., Cherubusco; butter.

Hungerford, Mrs. Wm., Ithaca; butter.
Hunt, Chas. R., Franklin; butter.
Huntington, Charles, Moons; cheese.
Hurst, E. A., Macomb; cheese.
Hutson, T. R., Delhi; butter.
Hygert, T. C., Andes; butter.
Ingalls, John R., New Kingston; butter.
Ingalls, William, Margaretville; butter.
Irvin, D. W. C., Massena; butter.
Irvin, N. W., Poland; butter.
Irwin, J. M., Sinclairville; cheese.
Ives, Charles, Little Falls; cheese.
Jackson, J. T., Franklin; butter.
Jackson, W. T., Charlotte Center; cheese.
Johnson, Geo., Stamford; butter.
Johnson, L. A., Collins; cheese.
Johnson, M. J., De Kalb Junc.; cheese.
Jones, W. S., Ruth; butter.
Jordanville Factory, Mohawk; cheese.
Kast Bridge Factory, Mohawk; cheese.
Katsmeyer, A., West Leyden; cheese.
Kaw, Michael, Boonville; butter.
Kay, Will. E., Herkimer; butter.
Keaton, C. N., Roxbury; butter.
Kelly, D. G., Roxbury; butter.
Kemp, Mrs. Peter, Delhi; butter.
Kemp, Robert, Delhi; butter.
Kennedy, Wm., Stamford; butter.
Kent, D. E., Watson; cheese.
Kessler, Chas., Pope; cheese.
King, J. G., Andes; butter.
King, John H., Hohart; butter.
Kinney, J. M., Pine Bush; butter.
Kirkland Creamery Co., Kirkland; butter.
Kittle, Oren, Jasper; butter.
Klopner, Fred. E., Port Leyden; cheese.
Knox, L. J., Hermon; butter.
Krom, B., Delhi; butter.
Ladd, Danl., Canastota; cheese.
Lalone, G. A., De Kalb Junc.; cheese.
Lanford, H. B., Franklin; butter.
Lash, J. H., Lowville; cheese.
Lathrop, H. N., Franklin; butter.
Laury, M. M., Stamford; butter.
Lawrence, Jno. C., Margaretville; butter.
Lawrence & Darling, Chester; cheese.
Leasworth, C. G., Forestville; cheese.
Leath, R., Shavertown; butter.
Le Grange Creamery Co., Poughkeepsie; butter.
Lemon, H. H., Pope; cheese.
Leonard, H. & T. C., Crary's Mills; butter.
Lewis, Dell, Fredonia; cheese.
Lewis, F., Canadea; cheese.
Lewis, John E., Morley; butter.
Lincoln & Cramer, Canton; cheese.
Lindsey, Grant, Attica; cheese.
Line Road Factory, Clayton; cheese.
Lints, S. P., Jr., East Schuyler; cheese.
Little, George, Andes; butter.
Lloyd, Samuel, Franklin; butter.
Lowman, E. M., Lowman; butter.
Luce, Elbert M., Charlotte Centre; cheese.
Lull, G., Owego; butter.
Lyn, John, Delhi; butter.
McAdam, John, Forestville; cheese.
McAdam, Wm., Centralia; cheese.
McAllister, James, Moons; cheese.
McBain, A. D., Brockport; butter.
McClaran, Robert A., Charlotte Center; cheese.
McDonald, C. R., Delhi; butter.
McDonald, Elmer, Kennedy; butter.
McDonald, J. B., Van Hornesville; butter.
McDonald, John T., Delhi; butter.
McFarland, J. M., Delhi; butter.
McGibbon, D., Walton; butter.
McGibbon, John, Walton; butter.
McGilroy & Hoag, Norwich; butter.
McGrath, Thomas H., New Boston; cheese.
McGregor, John A., Stamford; butter.
McIntosh, J., Roxbury; butter.
McKinney, H. J., Pine Bush; butter.
McLaury, D. P., Stamford; butter.
McMillan, John, Dresserville; butter.
McMundy, J. S., Delhi; butter.
McNaught, C., Bovina Centre; butter.
McQueen, C., Andes; butter.
McQuinn, Martin, Burnhams; butter.
Mable, George S., Delhi; butter.
Mable, James D., Delhi; butter.
Mable, R. A., Delhi; butter.
Macomber, Wm. N., Margaretville; butter.
Main, H. C., Hermon; butter.
Malen, R., Delhi; butter.
Mallory, L., Moons; cheese.
Maple Shade Creamery, Texas Valley; butter.
Markham's Factory, Collins; cheese.
Marsh, G. S., Cuba; cheese.
Marsh, H., Kennedy; cheese.
Marshfield Factory, Collins; cheese.
Martin, John R., North Blenheim; butter.
Mason & Hunt, Sinclairville; cheese.
Mason, P. P., Bath; butter.
Matteson, Henry S., Morris; butter.
Mayham, Ralph, Stamford; butter.
Mayham, W. H., Stamford; butter.
Mayne, H. S., Lisbon Centre; cheese.
Mead, M., Roxbury; butter.
Meeker, C. J., Roxbury; butter.
Mellon, W. J., Boonville; cheese.
Merrill, Chas. E., Franklin; butter.
Merrill, Daniel W., Franklin; butter.
Merry, G., Verona; cheese.
Meyers, Chas. J., Margaretville; butter.
Middleman, J. R., Madrid; butter.
Middlemist, J., Walton; butter.
Miller, A., Adams; cheese.
Miller, D. H., Rodman; cheese.
Miller, John N., Bovina Centre; butter.
Miller, M., Bovina Centre; butter.
Miller, Norman, Jenksville; butter.

Miller, W. E., Hobart; butter.
Miller, Wm., E. Troupsburg; butter.
Mills & Munson, N. Franklin; butter.
Mitchell, H. H., East Meredith; butter.
Montague, M., Sinclairville; cheese.
Montgomery, C., Nashville; cheese.
Moon, T. E., Collins; cheese.
Moore, C D., Lowville; cheese.
Moore. E. G., Oxford; butter.
Moore, H. L., Shavertown; butter.
Moore, J. Burke, Oxford; butter.
Moore, Mrs. J. W., Bath; butter.
Morehouse, Henry D., Ava; cheese.
Morganstern, C. J., Attica; cheese.
Morse, H., Roxbury; butter.
Morton, Levi P., Rhinecliff; butter.
Morton, Wm. H., Attica; cheese.
Morts, Marion C., Mohawk; cheese.
Mowers, L., Mill's Mills; cheese.
Mowry, W. R., Oxford; butter.
Mundy, J. R., Norwich; butter.
Munson, E S., Franklin; butter.
Murphy, Francis, Pike; butter.
Mussman, Augustus, Margaretville; butter.
Myers, F W., Mohawk; butter.
Nelis, J. P., Gravesville; cheese.
Neuenschwander, J. & J., Monroe; cheese.
New York Agricultural Experiment Station, Geneva; cheese.
Nichols, John O., Harpersfield; butter.
Nichols, Wm., Delhi; butter.
Nicoll, W. K., Andes; butter.
Noble, Mrs. H. M., Bath; butter.
Northrup, Frank, Wegatchie; cheese.
Norton, Robert, & Co., Attica; cheese.
Norton, W. H., South Stockton; cheese.
Ogden Creamery, Franklin; butter.
Olden, C. S., Leon; cheese.
Oliver, D. A., Bovina Centre; butter.
Oliver, John, Collins; cheese.
Oliver, R., Delhi; butter.
Olmstead, A., Orwell; cheese.
Olmstead, H., East Walton; butter.
One Thousand Island Factory, St. Lawrence; cheese.
Osborne, W. D., Port Byron; butter.
Owens, Jas. H., Chenango; butter.
Owenshire, F. C., Bath; butter.
Oyer, Oscar, East Schuyler; cheese.
Paine, John L., Jordanville; butter.
Palmer, D. P., Franklin; butter.
Palmer, R. H., Deposit; butter.
Parker & Edgerton, Coventry; butter.
Parker, J. H., Gouverneur; cheese.
Parkhurst, J. I., Clymer; cheese.
Parsons, James, Moons; cheese.
Pease, Howard N., Delhi; butter, cheese.
Peaslee, F., East Randolph; cheese.
Peaslee, W. T., East Randolph; cheese.
Peck, S., Delhi; butter.
Penfield, Oren, Franklin; butter.
Peters, Daniel W., Stamford; butter.
Peters, Eber V., Stamford; butter.
Peters, H., Turin; cheese.
Peters, J. N., Stamford; butter.
Petrie, Alphonso, Middleville; cheese.
Phillips, C. H., Addison; butter.
Pickard & Baker, Hermon; cheese
Pierson, R., Walton; butter.
Pitkin, L. S., Loraine; cheese.
Place, C. L., Gouverneur; cheese.
Platt, H. N., McDonough; butter.
Polly, C. S., Margaretville; butter.
Porter, Geo. B., New Haven; cheese.
Post, F. F., Delhi; butter.
Potter, Chas. O., Franklin; butter.
Powers, W. E., Forestville; cheese.
Prentice, W., Owego; butter.
Prentice, W. E., Newark Valley; butter.
Price, Wm. H., New York; cheese.
Purdy, Florence, McDonough; butter.
Purdy, Geo. A., McDonough; butter.
Purdy, O. B., Downsville; butter.
Purdy, Thomas, Green; butter.
Putnam, Delos, Centralia; cheese.
Quinlan, T. B., Van Hornesville; cheese.
Race, E. E., Greene; butter.
Ramsey, I., Morristown; cheese.
Rankin, L. G., Little Falls; cheese.
Ransom, C. W., Dolgeville; cheese.
Rathbun, G. H., Franklin; butter.
Raynor, Lewis J., Copenhagen; cheese.
Red Hook Creamery, Upper Red Hook; butter.
Reed, J. J., Lansing; cheese.
Reed, James W., Caroline; butter.
Reed, L. E., Sinclairville; cheese.
Reed, Richard, Sinclairville; cheese.
Reed, William, Sinclairville; cheese
Rees, H. A., Lowville; cheese.
Reilly, J. W., Attica; cheese.
Renolds, Geo., Theresa; cheese.
Rexford, O. W., Watertown; butter.
Reynolds, C. D., Roxbury, butter.
Rice, James, Little Falls; cheese.
Rich, Frank, Bigelow; cheese.
Richards, E., Owego; butter.
Richardson, W. W., West Schuyler; cheese.
Rider, F. A., Forestville; cheese.
Roberts, Jos, I., East Meredith; butter.
Robertson, M., Bovina Centre, butter.
Robertson, W. H., Delhi; butter.
Rockwell, L. S., Gilbertsville; cheese.
Rogers, Chas S., Franklin; butter.
Root, C. P., Gilbertsville; cheese.
Rose, David, Ellington; cheese.
Rose, E., Delhi; butter.
Rothlisberger, R., New York; cheese.
Rowley, S. C., Kennedy; cheese.
Ruff, G. H., Stamford; butter.
Ruff, J. G., Margaretville; butter.
Russell, James, Bovina Centre; butter.
Russell, John H., Bovina Centre; butter.
Russell, John P., West Meredith; butter.
Russell, S., Bovina Centre; butter.
Rutherford, John T., Canton; butter.
Rutherford, Thos. F., Madrid; butter.
Rutherford, Walter, Madrid; butter.

Rutherford, W., Waddington; butter.
Rutherford, W. L., Waddington; butter.
Salt Point Creamery, Salt Point; butter.
Sanford, D. E., Nicholville; butter.
Sanford, H. B., Franklin; butter.
Sanford, M. C., Margaretville; butter.
Sanford, R. J., Hopkinton; butter.
Sanford, Ross M., Hobart; butter.
Sanford, R. W., Margaretville; butter.
Sanford, W. L., Walton; butter.
Scheidell, Chas., Jeffersonville; butter.
Searl, J. H., Lowville; cheese.
Secor, Geo. E., Randolph; cheese.
Secor, R. C., Sinclairville; cheese.
Secor, W. G., Pope; cheese.
Shannon, M. A., Edentou; cheese.
Sharp, J. J., Howard; cheese.
Shattuck, J. B., Cherry Creek; butter.
Shaver, Geo., Shavertown; butter.
Shaw, A., Andes; butter.
Shaw, J. B., Crary's Mills; butter.
Shea, M. C., Attica; cheese.
Sheffner, E. A., Edwards; cheese.
Sheldon, G. B. & Son, Gouverneur; butter.
Shepard, D. L., Mount Upton; butter.
Shipman, Chas., Owego; butter.
Shoulette, C. J., Rossie; cheese.
Shull, Josiah, Ilion; butter.
Shults, A. M., State Line; butter.
Sherruck Creamery, Sherruck; butter.
Shutts, E. M., Stamford; butter.
Sibley & Rowley, Kennedy; butter.
Sigbee, James, Franklin; butter.
Simpson, D. C., Jasper; butter.
Sinclair, W. A., Kanona; butter.
Sisson, Geo. W., Potsdam; butter.
Sloat, Zach, Franklin; butter.
Slosson, Ira, Roxbury; butter.
Slosson, J. B., Roxbury; butter.
Smith, Alex., E. Meredith; butter.
Smith, Alpheus, Norwich; cheese.
Smith, A. J., Mannsville; cheese.
Smith, B. S., Roxbury; butter.
Smith, Chas., East Meredith; butter.
Smith, G. A., Frankfort; cheese.
Smith, Irving, Richville; cheese.
Smith, Jackson, Herkimer; cheese.
Smith, Jacob, Mundale; butter.
Smith, James M., Bloomfield; butter.
Smith, J. D., Walton; butter.
Smith, John H., Forestville; cheese.
Smith, Miss Jennie, Bath; butter.
Smith, Monroe, East Randolph: cheese.
Smith, Murray H., Sinclairville; cheese.
Smith & Powell, Syracuse; butter.
Smith, R., Delhi; butter.
Smith, T. W., Kanona; butter.
Smith, W. B., Bovina Centre; butter.
Smith, W. E., Gouverneur; cheese.
Spencer, Wm. C., Lowville; cheese.
Spink, E., Attica; cheese.
Squires, Albert, Franklin; butter.
Standard Butter Co., Owego; butter.
Star Factory Co., Antwerp; cheese.
Starin, B. F., Kirkville; cheese.
Starkweather, R. G., Jordanville; cheese.
Starly, Mathew, Margaretville; butter.
Stary, L., Kennedy; cheese.
Stedman, Frank, Attica; butter.
Steele, Thomas L., Delhi; butter.
Steuber, S. S., Holland Patent; cheese.
Stevens, A. A., Charlotte Center; cheese.
Stevens, M. E., Charlotte Center; cheese.
Stevens, Nelson, West Groton; butter.
Stewart, C. W., Stamford; butter.
Stewart, Hector, Stamford; butter.
Stewart, J. B., Delhi; butter.
Stewart, John, Stamford; butter.
Still, C. B., Theresa; cheese.
Stockton, S. J., Copenhagen; cheese.
Stockwell, Frank, Copenhagen; cheese.
Stone, E. L., Mannsville; cheese.
Stone, Manly, E. Randolph; cheese.
Stoutenberg, C. L., Dehli; butter.
Stoutenburg, W. G., Delhi; cheese.
Straight, J. P., Laona; cheese.
Strangeway, J. L., Andes; butter.
Stradling, Thos., & Son, Hamilton; butter.
Sunlan, J., Delhi; butter.
Suttle, R., Downsville; butter.
Sweetland, H. S., Randolph; cheese.
Swift, G. C., Jordanville; cheese.
Swift, Nathan W., Paines Hollow; cheese.
Tabor, James E., Centralia; cheese.
Talcott, C. H., Massena Springs; butter.
Taylor, Clayton C., Lawton Station; butter.
Taylor, H. P., Stamford; butter.
Tefft, Geo. H., South Stockton; cheese.
Tefft, Lewis, South Stockton; cheese.
Telford, T., Delhi; butter.
Thomas, D. G., Alexander; cheese.
Thompson, A. C., Owego; butter.
Thompson, A. N., Delhi; butter.
Thompson, John M., Delhi; butter.
Thompson, J. R., Delhi; butter.
Thompson, Thomas, Sinclairville; cheese.
Thompson, Wm., Delhi; butter.
Todd, D. & O., Margaretville; butter.
Torn, C. G., Hobart; butter.
Tower, L. H., Moons; cheese.
Travor, Walter, Daysville; cheese.
Truesdell, H. E., Canton; cheese.
Tschumey, S., Constableville; cheese.
Tucker, O. J., Newport; cheese.
Tuthill, Edw. E., Stamford; butter.
Tuttle, A. L., South Edmeston; cheese.
Tuttle, C. D., East Randolph; cheese.
Tuttle, C. L., East Randolph; cheese.
Tuttle, E. E., Jefferson; butter.
Tweedie, A. B., Walton; butter.
Union Factory, Collins; cheese.
Valkins, Edward, Attica; cheese.
Van Akin, J. D., Loomis; butter.
Van Amburgh, Eber, Stamford; butter.
Van Benschoten, H. O., Margaretville; butter.

DAIRY EXHIBIT

Van Demark, W., Owego; butter.
Van Dyke, Edward, Delhi; butter.
Van Etten, E., Owego; butter.
Van Horn, N., North Bay; cheese.
Van Wagner, Jared, Lawyersville; butter.
Vary, W. H., Harrisburgh; cheese.
Wafer, James, Newville; cheese.
Wager, D. A., North Brookfield; cheese.
Wait, M. R., Canton; cheese.
Wakefield, C. B., Kennedy; cheese.
Walker, J. B., Attica; butter.
Walker, J. W., Charlotte Center; cheese.
Walker, W. H., Sinclairville; cheese.
Walters, L., Newark Valley; butter.
Walworth, H. A., Greene; butter.
Water, D. W., Rice's; cheese.
Waterman, J., Owego; butter.
Weaver, Fred., Cherry Creek; butter.
Weller, J. S., Fairfield; cheese.
West Concord Factory, Collins; cheese.
Western, H. L., Canton; cheese.
Wheat, J. F., Croton; butter.
Wheelock, S. C., North Winfield; cheese.
White, John W., Hobart; butter.
Whitford, Leroy, Stow; butter.
Wiglesworth, Mrs., Russell; cheese.
Wilber, Frank, Franklin; butter.
Wilcox, C. C., Oswego Falls; butter.
Wilcox, James, Shavertown; butter.
Wilder, J. D., Centralia; cheese.
Williams, T. J., Remsen; cheese.
Williams, W. D., Malone; butter.
Wilson, Cyrus B., Fredonia; cheese.
Wilson, W. R., Delhi; butter.
Winchester, M. D., Attica; cheese.
Winter, Jno. W., New Kingston; butter.
Winter, Robt. A., Margaretville; butter.
Winter, Wm. T., New Kingston; butter.
Wood, John, Ruth; butter.
Wood, James L., De Kalb Junc.; cheese.
Wood, J. M. & C. A., Ruth; butter.
Wooster, C. A., North Hammond; cheese.
Worden Bros., Andes; butter.
Wright, Abner C., Wellsburgh; butter.
Wright, Geo. R., Marcy; cheese.
Wyman, J. B., Orwell; butter.
Yoemans, Mrs. Wm., Delhi; butter.
Young, George, North Hammond; cheese.
Young & Young, Fillmore; cheese.
Youngling, Louis, New York; cheese.
Zoar Factory, Collins; cheese.
Zoller, J., Little Falls; cheese.

# INDIVIDUAL EXHIBITS.

## GROUP 1.— CEREALS, GRASSES.

American Cereal Co., New York; farinaceous foods, etc.
Conklin, E. W., & Son., Binghamton; seed.
Henderson, Peter, & Co., New York; field seed.
Whitney, Noyes Seed Co., Binghamton; seed.

## GROUP 2.— BREAD, BISCUITS, STARCH, ETC.

Columbia Macaroni Mfg. Co., New York; macaroni.
Durkee, E. R., & Co., New York; baking powder.
Kingsford & Son, Oswego; starches.
National Starch Mfg. Co., New York; starches.
New York Biscuit Co., New York; crackers, etc.
Thacher, H. D., & Co., Potsdam, N. Y.; baking powder.

## GROUP 3.— SUGARS, SYRUPS, CONFECTIONERY, ETC.

American Sugar Refining Co., New York; sugars.
Curtice Bros. Co., Rochester, N. Y.; maple syrup.
Dietrich & Co., New York; confectioners' and bakers' trimmings.
Geneva Experiment Station, Geneva; sorghum cane, sugar, syrup.
Hastings, Matthew E., New York Mills, N. Y.; beekeepers' supplies.
Little, Malcom, Malcom, cane syrup.
Maillard, Henry, New York; confectionery.
McCullum, John, Caledonia; sorghum.
McKeel, Isaac, Poplar Ridge; amber cane syrup.
McMillan, James, Fairport; amber cane syrup.
National Starch Mfg. Co., New York; glucose.
Overbaugh & Hartman, New York; confectioners' cartoons.
Schall & Co., New York; confectionery ornaments.
Worthington, H. R., New York; sugar pumps.

### GROUP 6.— FOOD PREPARATIONS.

American Lactose Co., New York; milk sugars.
Bovine Co., New York; extract beef.
Curtice Bros., Rochester, N. Y.; canned meats.
Curtice, Olney Co., Rochester, N. Y., canned corn, etc.
Dadirrian, Marker G., New York; matzoon and matzol.
Erie Preserving Co., Buffalo, N. Y.; canned vegetables.
Franco-American Food Co., New York; soups, etc.
Humbert, Henry & Co., Brooklyn, N. Y., jelly, soups.
New York Condensed Milk Co., New York; condensed milk.
Schepp, Leopold, New York; cocoanut.

### GROUP 7.— DAIRY AND DAIRY PRODUCTS.

De Laval Separator Co., New York; cream separators, etc.
Diamond Balance Churn Co., Ballston; churns.
Elsworth, Edward, & Co., New York; dog biscuit.
Genesee Salt Co., New York; salt.
Hansen's, Chr., Laboratory, Little Falls; butter and cheese.
Jack Frost Freezer Co., New York; ice cream freezers.
Marquis James B., Norwich; butter, etc.
Scoville, E. N., Manlius; faucets.
Thacher Manufacturing Co., Potsdam; dairy supplies.
Watson, Abraham, New York; ice cream freezers.
Worthington, H. R., New York; pumps and condensers.

### GROUP 8.— TEA, COFFEE, SPICES, AROMATIC AND VEGETABLE SUBSTANCES.

Antonsaurti, M., & Co., New Dorp; sauces.
Consolidated Cigarette Co., New York; cigarettes.
Curtice Bros., Rochester; tomato catsup.
Durkee, E. R., & Co., New York; spices, sauces, etc.
Ellinger, Julius, & Co., New York; cigars.
Garcia, F. A., & Co., New York; cigars.
Gulden, Chas., New York; mustard.
Kerbs, Wertheim & Shiffer, New York; cigars.
Lozano, Pendas & Co., New York; cigars.
Maillard, Henry, New York; cocoa, etc.
Nash, Whiton & Co., New York; spices, etc.
New York Condensed Milk Co., New York; extract of coffee.
Ottenberg, L., & Co., New York; cigars.
Stahl, Jacob, Jr., New York; cigars.
Sanchez & Haya, New York; cigars.
Seidenberg & Co., New York; cigars.
Staehlberg, M., & Co., New York; cigars.
Surbrug, John W., New York; tobacco.
Upmann, Carl, New York; cigars.
Ybor, V. M., & Maurara, New York; cigars.

### GROUP 9.— ANIMAL AND VEGETABLE FIBRES.

Engelberg Huller Co., Syracuse; cotton gin.
Wallis, Lispenard, Cotton Picker and Machinery Co., New York; cotton picker.

### GROUP 10.— MINERAL WATERS.

(See, also, Mines and Mining Catalogue, page 358.)

Goode, Thomas F., Buffalo; mineral water.
Morgan, John, New York; mineral water.

### GROUP 11.— WHISKIES, CIDER AND ALCOHOL.

(See, also, Viticulture Catalogue, pages 248–251.)

Curtice Bros. Co., Rochester; vinegar.
Franchi, Emilio M., New York; vermouth.
Osborn, John, Son & Co., New York; rye whiskey.
Wolfs, Udolpho, Son & Co., New York; schnapps.

### GROUP 12.— MALT LIQUORS.

Beadleston & Woerz, New York; lager, beer, etc.
Evans, C. H., Hudson; ale.
Mayer, David, Brewing Co., New York; lager, ales.

GROUP 13.— FARM MACHINERY.

Worthington, H. R., New York; distillery pumps.

GROUP 14.— FARM BUILDINGS.

Buckley, C. E., Dover Plains; stable fitting.

Thompson, A. L., East Avon; fastener for wire fence.

GROUP 16.— FARM TOOLS AND MACHINERY.

Adriance, Platt & Co., Poughkeepsie; binder, reaper, etc.

American Tillage Co., New York; steam plow and seeder.

Astor, John Jacob, New York; road improver.

Birdsall Co., Auburn; thresher and separator.

Champion Drill Co., Avon; grain drills.

Chanler, John A., New York; method for constructing roads.

Climax Road Machine Co., Marathon; road machine.

Clipper Chilled Plow Co., Elmira; plows, harrows, etc.

Columbian Cordage Co., Auburn; binding twine.

Dederick, P. K., & Co., Albany; mounted engine.

Empire Drill Co., Shortsville; grain drills.

Engelberg Huller Co., Syracuse; rice and coffee huller.

Eureka Mower Co., Utica; mower.

Gillette Clipping Machine Co., New York; horse clipping machine.

Hendricks, D. B., Kingston; baling presses.

Johnston Harvester Co., Batavia; harvester and binder.

Kemp & Burpee Mfg. Co., Syracuse; manure spreader.

Morgan, D. S., & Co., Brockport; harrows and hoes.

Osborne, D. M., & Co., Auburn; harrows.

Slauson, Daniel, Fulton; iron gate.

Stevens, A. W., & Son, Auburn; threshing machine.

Superior Land Roller Co., Geneva; field rollers.

Syracuse Chilled Plow Works, Syracuse; plows, etc.

Tousley Harvester Co., Jamestown; harvester, etc.

Westinghouse Co., Schenectady; threshers.

Wood, Walter A., Mowing and Reaping Machine Co., Hoosick Falls; harvester, etc.

GROUP 17.— FERTILIZERS.

Grace, Wm. R., & Co., New York; soda potash, etc.

Knox, Chas. B., Johnstown; gelatine.

McLeish, E. E., & Co., Buffalo; gelatine.

GROUP 18.— OILS, SOAPS, ETC.

American Cotton Oil Co., New York; cotton seed oil, etc.

Baker Castor Oil Co., New York; castor oil.

Baumer, Francis, Syracuse; candles and beeswax.

Dall, Chas, Newburgh; cloth renovator.

Eckermann & Will, Syracuse; beeswax and candles.

Miller, Wm. P., Co., Brooklyn; lubricating compound.

Noonen, T. H., & Co., New York; clothes cleaner.

Phœnix Candle Co., New York; candles.

Scoville, E. U., Maulius; hay fork pulleys.

Ward, Everett, New York; soaps and soap powder.

DEPARTMENT B.— GROUP 21.

Exhibits classed in other departments, but installed in this:

Erie Preserving Co., Buffalo; preserved fruits.

DEPARTMENT C.— GROUP 34.

Exhibits installed in other departments but allied to this:

Lindemann, O., & Co., New York; bird cages.

DEPARTMENT E.— GROUP 48.

Nash, Whiton & Co., New York; salt.

# REPORT ON THE HORTICULTURAL EXHIBIT.

## VITICULTURE.

By GEORGE C. SNOW, Penn Yan, Superintendent.

In 1846 the New York city market for grapes was broken under pressure of a shipment of 200 to 300 pounds sent by way of the Erie canal by a grower in the Keuka lake district. In the season of 1890 there was shipped from this same district to various distributing markets, 20,000 tons, or 40,000,000 pounds, of grapes. This was, of course, independent of the amount sold to makers of wine. The total shipments of table grapes from the New York State district in the season of 1890 amounted to 98,000,000 pounds. It appears from the same census bulletin from which these figures are drawn that the grape crop of New York returns in money value to the grower more than that of California. For the present year the aggregate yield of grapes for the table in this State will not be less than 100,000 tons.

The fact that New York's position as a grape-growing and wine-producing State is not generally known or fully appreciated, furnished an additional reason for organizing a bureau of viticulture as a branch of the State exhibit. The classification of the exposition called for an exhibit of the grape and its products; the methods of pruning and training vines; packages for marketing grapes; the literature and statistics of viticulture. The appointment of the superintendent was not made till October, 1892, somewhat too late to secure an adequate collection of many varieties of the crop of that year for exhibition in 1893. A satisfactory exhibit was, however, brought together under the following division of the exposition classification:

Class 119 — The vine and its varieties — shown by living examples, by cuttings, by engravings, photographs, etc.

Class 120 — Methods of planting, staking and training the vine.

Class 122 — Grapes for table.

Class 123 — Grapes for wine making.

Class 125 — Methods of and appliances for cultivating, harvesting, curing, packing and shipping grapes.

Class 126 — White wines.

Class 127 — Red wines.

Class 128 — Sweet wines.

Class 129 — Sparkling wines, champagne.

Class 131 — Brandy of all kinds.

In class 119 a fine collection of photographs, containing forty plates, was made. By permission and through the courtesy of L. H. Bailey, professor of horticulture at Cornell University, these were selected from his large private collection, and illustrated in detail the principal methods of pruning and training the vine used most extensively in the State. In addition to these, sixteen typical grape vines were cut

AGRICULTURAL EXHIBIT

from their roots at the surface of the ground in the vineyards, taken from the trellis carefully, boxed and transported to the nursery grounds at the exposition. Here they were placed on a trellis of the same material and style as the one from which taken, and showed precisely as before removal. These vines were from the vineyards of William D. Barnes, of Middle Hope, illustrating the Kniffen system; from those of G. E. Emmerson, of Lockport, illustrating the modified Kniffen system, and from those of G. C. Snow, of Penn Yan, and Eb. G. Coleman, of Bluff Point, illustrating the renewal system.

A further photographic display was made on eight by ten cards of the many varieties of grapes native to the State.

These were mounted on large cards, twenty-two by twenty-eight, and exhibited in cabinets.

Class 120 was well represented by the trellis required for exhibiting the vines described as being placed in the nursery in the preceding class; the training, by replacing the vines on the trellis in the same position in which they had been trained in the vineyard previous to removal.

In classes 122 and 123, grapes for table use and wine making, an exhibit was shown which excelled anything of the kind ever made in quality and quantity; 295 varieties were shown. It would be proper to divide the display in two periods, one of the crop of 1892, and the other the crop of 1893, as the State was awarded a medal and diploma on each. Owing to the lateness of the season at which the work of collection was begun in 1892, most of the varieties wanted had become too ripe to be of value for holding. Three varieties, Catawbas, from the vineyard of George S. Sheppard, Dianas, from the vineyards of Harvey D. Pratt, and Isabellas, from the vineyard of Frank Kinyoun, all situated on Bluff Point, Lake Keuka, were selected. They were placed in cold storage at Penn Yan about November 1, 1892, and there held until spring; about thirty cases in all. Four cases were forwarded by express to the exposition in time for the opening. In the meantime, the rest were sent forward by freight and placed in the Cold Storage Building on the exposition grounds, being taken thence to the Horticultural Building as needed. Fresh grapes of the three varieties were exhibited from May first, the opening day, to August first. During a large part of this time there were 150 plates on exhibition, about evenly divided as to varieties among the above-named. In the fire, which consumed the Cold Storage Building with its contents, on July 12, 1893, eight cases of New York grapes were destroyed. But for this loss, fresh grapes would have been exhibited in good condition from the beginning to the end of the exposition, from the State of New York. No room being assigned by the exposition authorities for the display of grapes alone, space was, of necessity, used in the pomological department; in consequence of this, a smaller display was made than would have been under other circumstances.

The crop of 1893 began to arrive on the fifteenth day of August, the first being of the Champion variety, sent by William D. Barnes, of Middle Hope, N. Y.; others followed in rapid succession from that section. The State Experiment Station at Geneva, came next, with twenty varieties, on September fourth; and Mr. G. E. Ryckman, of

Brocton, Chautauqua county, sent a number of varieties on September fifth. These localities represent the eastern, central and western portions of the State. On September sixteenth 516 plates were displayed, and during the month of October about 1,200 were constantly in evidence. This display was continually changing, and to keep it in perfect condition, required the replacing on an average of 150 plates daily. Particular attention was paid to the arrangement of the exhibit, so that new varieties might be compared with old; also, that the keeping qualities of the different varieties could be tested. The most careful attention was given to correct nomenclature, and every opportunity was afforded those from abroad, or unfamiliar with the fruit, to gain desired information; a competent attendant was always present to answer inquiries. Many new varieties were exhibited. Among the most prominent contributors of these were the New York Experiment Station at Geneva; D. S. Marvin, of Watertown; J. S. Copley, of Stapleton; Ellwanger & Barry, of Rochester; and W. H. Millspaugh, of Branchport. The largest cluster of grapes exhibited during the exposition from any place was grown and contributed by David M. Dunning, of Auburn, N. Y., and weighed nine and one-half pounds.

No distinction was made as between grapes for wines and grapes for the table, as nearly all our native varieties and their hybrids are used for both purposes. Several wine companies made an exhibit of the grapes which they use. The grapes exhibited were contributed by 170 growers, situated in different parts of the State. A circular of instructions concerning packing, together with printed shipping tags, mailed to a large number of growers, resulted in the fruit arriving in good order and with very few exceptions in good time. Except in the case of the fruit placed in cold storage in the fall of 1892, the entire exhibit was composed of fruit contributed by growers distributed over a very wide territory of the State. Their names and the varieties represented will be found in the catalogue.

In class 119 the State of New York received an award for photographs of vines and models of training, etc. In class 122 the State of New York received an award for its exhibit of grapes of the crop of 1892. Also an award for its display of grapes of the crop of 1893. In classes 119 and 122 the State of New York and private exhibitors from the State received more awards than all the other States combined. In class 125 five manufacturing companies made entries of baskets and other devices for the safe shipment of fruit from the vineyards to the various markets. No exhibits were made in this class from other States or countries.

Situated in the gallery of the north pavilion, where there was ample room, these exhibits could be thoroughly examined by all interested, and as each device was used in transporting the fruit to the exposition, their practical value was fairly tested.

## WINES.

Next to California New York was the largest exhibitor of American wines. A much more impressive showing could have been made by the State had it been in one space instead of the three, which the

exigencies of the department compelled us to accept. The exhibit in the gallery occupied 342 square feet of space and on the ground floor 564 square feet. Exhibits were made by sixteen manufacturers of wine and eight of brandy. The tests made at this exposition will tend to establish and confirm the fact that wines, especially champagnes, made in this State are of good quality and will serve to demonstrate that the industry must rapidly increase and soon become one of the leading sources of our wealth. New York is already the second State in wine production in the United States and the output is rapidly increasing.

Some improvements in methods must be accepted in the near future, upon which will rest a large share of further success. One in particular applies not only to New York State, but to all manufacturers throughout the United States. The fault into which most manufacturers seem to fall is in making too many varieties of wines from grapes grown in any one locality. It is a recognized fact in the old wine-producing districts abroad, that special kinds of wines are best in limited localities, and even the best quality of a given variety is still more limited in area, even to a single trellis in a vineyard. This is the opinion after hundreds of years' experience, and results in the production of wines with world-wide reputations. The results of the Chicago Exposition fully bear out this view. Some localities will warrant a fine claret, some excel in port and sherry, while others produce fine wines named for the grapes from which made, and which excel, as the grape excels, in that locality.

New York State has three sections where the grapes grow to perfection. The first is the Hudson River district; the second, the Central or Lake section, and the third the Chautauqua district, situated near the Lake Erie shore in Chautauqua county. From each some fine wines were shown. From the Hudson came the fine exhibit made by the Brotherhood Wine Company, whose cellars are at Washingtonville, Orange county. The business was organized about fifty years ago, and some choice wines made before 1850 are still in the vaults. Chautauqua county was well represented by E. G. Ryckman, of Brocton, and Messrs. Fuller & Skinner, of Portland. Many varieties of wines from these two cellars were of the vintages of 1865, 1870, 1874 and later. The Brocton Wine Company, under a different management, began business in 1859, and has been enlarged until the floor space now occupied is nearly 13,000 square feet. By far the largest portion of wines made in the State is on the shores of Lake Keuka and vicinity. The planting of vines began here in 1842. There was no organized company for the wine manufacture until the organization of the Pleasant Valley Wine Company in 1860. Champagne is the leading kind of wine made by this company, the "Great Western Extra Dry" being the best brand. From this beginning has grown a large industry, and numerous firms are now located in the district, the most prominent being the Germania Wine Cellars, the Columbia Wine Cellars and the Crescent Wine Company. The capacity of the Pleasant Valley Wine Company, for the manufacture of champagne, has been nearly doubled within the past year. The

Germania Wine Cellars occupy a very pleasant location on the hillside near the Pleasant valley. This company confines its energies to the making of champagne and a few varieties of still wines. The leading brand of champagne is the "Excelsior." The post office of this vicinity of the Lake district is Rheims. It should be noted that all, or nearly all, of the makers of wines are growers as well of grapes which they use for their wines. The Hammondsport Wine Company is situated in the village of Hammondsport. The principal business for many years was still wines but of late they have been making a fine brand of champagne, known as the "Golden Age." There are various other wine cellars in the village. About four miles from Hammondsport is the Urbana Wine Cellar on the west shore of the lake. The leading production of this company is champagne, the leading brand being the "Gold Seal," though much still wine is made. The plant has been nearly, if not quite, doubled within the past two years. This company was organized in 1865, and they are extensive growers of grapes. Two or three miles further down the lake, at Gibson's Landing, is the Keuka Wine Company, organized a little later than the Urbana Company. The principal business has been the making of still wines, but for a few years they have been making champagne. The leading brand is the "L. K. W." The Helvetia Wine Cellar is located at Keuka, on the easterly side of the lake, and manufactures still wines exclusively.

At Penn Yan are situated the wine cellars of the Empire State Wine Company, the Hammondsport Vintage Company and other makers. The leading productions of these companies are still wines, though the Empire Company is beginning to make champagne.

The Irondequoit Wine Company have their vineyards and wine cellars on the shores of the Irondequoit bay, near Rochester. They are producers of still wines, made and sold entirely for medicinal purposes. Messrs. H. T. Dewey & Sons, though situated in the city of New York, have a large percentage of their wines made on the shores of Lake Keuka. They exhibited champagne as well as many varieties of still wines. Seneca lake was represented by wines from the cellar of H. T. & J. D. Henderson. They are makers of a few varieties of very good wines and are extensive growers of grapes as well.

Nearly all the wine makers make brandy, some of them of a very good quality, as will be seen by examination of the lists of awards made at the exposition. The Pleasant Valley, Urbana, Germania and Brocton companies, in addition to their exhibit of wines, made exhibits of the grapes from which their wines are manufactured. There may be found a number of other wine cellars in various localities in the State. The ones mentioned are those who made exhibits of their products at the exposition.

New York is the leading State in the production of American champagne and is only surpassed in the amount of still wines by California. The list made at the exposition will tend to establish and confirm the fact that wines made in this State are of good quality, especially the champagnes, and indications are that the business is rapidly increasing and soon to become one of the leading industries of the State. A

VITICULTURE, Wine Exhibit

number of wine makers exhibited in all the five classes for wines and brandy as named in the official classification, viz.: Class 126 — White wines; Class 127 — Red wines; Class 128 — Sherries, Madeira and Port; Class 129 — Sparkling wines, and Class 131 — Brandy. Details of the names of exhibitors and the products shown are given in the catalogues.

A very creditable exhibit of wines was made other than those from the grape, such as currant, elderberry, raspberry and blackberry wine. Of unfermented grape juice six manufacturers sent exhibits. This is a comparatively new product, being non-alcoholic, but embodying all there is in the grape, except the skin and seeds. A novel and interesting feature was the exhibit of cider brandy made by nine different producers, seven of whom received awards. Thirty-one New York exhibitors of wines and brandies received awards.

# CATALOGUE OF NEW YORK EXHIBITS IN DEPARTMENT B, HORTICULTURE.

## COLLECTIVE EXHIBIT.

GROUP 20.— GRAPES AND WINES.

NAMES AND ADDRESSES OF EXHIBITORS OF GRAPES.

Almy, W. C., Dundee; Archer, F. B., Ripley; Allen, H., Clarkson; Andrews, Paris, Perry.

Barnes, W. D., Middle Hope; Brown, W. B., Newburg; Brooks, Emma, Highland; Barnes, Frank, Newburg; Burton, H. A., Ripley; Bentley, S. P., Side Hill, Chautauqua Co.; Bateley, Mrs., Ripley; Benson, J. S., Ripley; Baker, Emory, Ripley; Barber, C. H., Ripley; Barrett, W. A., Ripley; Bradt, Cornelius, Castile; Balbridge, C. J., Kendaia; Bassett, Peter, Jr., Branchport; Bailey, Wm., Churchville; Babcock, Arnold, Branchport; Brown, Julia, Ripley; Burgess, A. J., Ripley; Barnes, H. M., Sodus.

Crissy, S. S., Fredonia; Chase, Geo. S., Bennettsburg; Coryell, L. H., Portland; Conley, E. M., Waterbury; Crawford Bros., N. East; Cristy, B., Ripley; Crouch, W. W., Ripley; Crocker, W., & Son, Ripley; Case, C. W., Ripley; Chautauqua & N. E. Grape Union, Brocton; Coe, Daniel, Highland; Cadwell, R. L., Brocton; Cranston, Geo., Sheridan; Cadwell, A. J., Port Byron; Case, Mrs. M. F., Ripley; Colvin, Mary, Ripley; Copley, Chas. J., Stapleton.

Dill, Robert, N. East; Dunning, B. M., Auburn.

Edgerton, E. I., Himrods; Ely, Wm., Hector; Eddy, O , Ripley; Ellwanger & Barry, Rochester.

Fay & Kelley, Brocton; Fletcher, O. B., Marlborough; Ferrant, J. A., Ripley; Farnham, H. MeN., Ripley; Felton, G. J., Ripley; Fairchild, O. H., Hammondsport.

Gelder, W. V., Dresden; Gleason, W. B., Westfield; Germania Wine Co., Hammondsport; Garrell, M., Westfield; Garlock, N. H., Sheridan; Gilletts, Mrs. M. S., Perry; Gay, Ira P., Ripley; Gardiner, A., Middle Hope; Gridley, A., Penn Yan.

Hampton, Edward S., Spring Brook; Hardenbrook, E. & I., Willard; Hamlet, E. E., Sheridan; Horton, Joel, Covert; Hart & Scott, Penn Yan; Harris, Wm, H., Brocton; Haslitt, J. R., Hector.

Inbury, G., Ripley.

Johnson, J. M., Ripley; Jones, E., Ripley; Jones, R. M., Ripley.

King & Robinson, Trumansburg; Keith, James, Ripley; Kingsley, E. T., Ripley.

Leet, C E., Mooreheadville; Little, T. B., Ripley; Lewis, H. T., Ripley; Leet, C. A., Mooreheadville; Lewis, A. J., Ripley; Lewis, C. C., Westfield; Long Point Vineyard Co., Dresden; Little, Edith, Ripley; Lobbett, J. J., North Ridgeway.

Millspaugh, W. H., Branchport; Marvin, D. S., Watertown; Mason, O. L., Ripley; Moorehead, M., Mooreheadville; Milligan, A. J., Mooreheadville; Murphy, W. H., Ripley; Morse, A., Ripley; Mason, G. W., Ripley; Miner, H. T., Sheridan; Moore, Jacob, Attica.

New York Experiment Station, Geneva.

Onthank, Geo. W., Ripley, Olin, B. P., North Hector.

Perry, A. R., Dresden; Pleasant Valley Wine Co., Rheims; Putman & Worden, Fayetteville; Peterplace, J., Ripley; Porte, C. R., Ripley; Paterson, J. W., Ripley; Peabody, A. S., Ripley; Pierce, P. P., Ripley; Purdy, J., Penn Yan; Payne, J. J., Sodus; Parker, J. J., Ripley; Purdy, F. H., Bluff Point.

Quinn, John, Ripley.

Ryckman, G. E., Brocton; Reeder, Lyman, Starkey; Rice, C. W., Ripley; Randall & Eddy, Ripley; Randall, Frank, Ripley; Royce, N. H., Ripley; Roberts, John B., Carlton; Reed, O. F., Romulus; Rice & Hunt, Ripley; Roberts, John F., Syracuse.

Snow, G. C., Penn Yan; Seneca Lake Grape Co., Himrods; Stebins, H. P., Ripley; Schutt, Wm , Ripley; Spencer, Frank, Ripley; Spitser, E. E., Ripley; Spencer, J. W., Westfield; Smith, H., Sheridan; Sheppard, Geo. S., Penn Yan; Shelby, F. M , Sheridan; Sutton, E. & N., Ovid; Sanford, L. H., Gaines.

Tompkins, Morris, Germantown; Trescott, B. F., Pavilion; Tolles, E. B., Sheridan; Town, S. Chester, Castile; Tabor, A. M., Perry; Turner, J. B., Ontario; Tallman, C. W., Batavia; Tozer, Howard H., Bristol Springs; Tabor, H. E., Castile.

Urbana Wine Co., Hammondsport.

Van Vleet, A. & H., North Hector.

Wells, S. J., Fayetteville; Welsh, B. H., Pittsford; Walker, T. J., Ripley; Washburn, A., Ripley; Whitehall, S. T., N. East; Wallace, L. E., Ripley; Woodruff, W., Ripley; Wisner, Ellen, Ripley; Woodruff, J. B., Ripley; Wisner, Chas., Ripley; Whitney, C. P., Orleans.

LIST OF VARIETIES OF GRAPES ON EXHIBITION.

Advance; Agawam; Amber Queen; Allen's Hybrid; August Giant; Adirondac, Aminia; Alma; Ambrosia; Alva.

Brighton; Beagle; Bacchus; Beauty; Black Pearl; Brown's Seedling; Bennett; Babcock; Barry; Burnett; Black Taylor; Boadicea; Barbarrossa.

Croton; Clevener; Centenial; Clinton; Concord Seedling; Catawba; Creveling; Chautauqua (black); Cayuga; Charter Oak; Chautauqua (white); Canonicas; Concord X Vulpina (10); Canada; Concord X Vulpina (2); Crance; Cynthiana; Canby's August; Columbia; Colerain; Cordello; Calypso; Corby; Champion; Cottage; Crystal Seedling; Concord.

Delaware; Downing; Dracut Amber; Duchess; Diana; Diana Seedling; Delaware Seedling (white); Delaware Seedling (red); Don Juan; Dingwell's White; Dartmouth; D'Elboux; Daisy.

Early Victor; Early Ohio; Emeulan; Empire State; Elvibach; Elsinburgh; Early Market; Elvira; Early Dawn; Eaton; Essex; Etta; Elvicanod.

Faith; Favorite.

Green Mountain; Grayson; Gov. Ireland; Gaertner; Geneva; Germania; Grein's Golden; Goetbe; Glenfield; Golden Grain; Gold Dust; Golden Drop.

Herald; Hubens; Hartford; Hayes; Herbert; Highland; Hopican; Hercules; Harrison; Haskell's Seedling; Hampton; Hebe.

Isabella Seedling; Ives; Isabella; Iona X Labrusca (a); Iona; Ives Seedling; Israella; Iona X Labrusca (F); Iona X Isabellas; Iona X Labrusca (S); Iona X Labrusca (D); Isabella Seedling (No. 2); Iron Clad; Imperial; Iona X Labrusca (C).

Janesville; Juno; Jessica; Jewell; Jefferson; Johnson.

Little Blue; Lutie; Lady; Lindley; Lucille; Lindmar; Lady Washington X Lab. (E); Lulie; Labrusca Seedling.

Marion; Mabel; Massasoit; Martha; Moyer; Montefiori; Moore's Diamond; Merrimac; Mary; Metternich; Maxatawney; Muscadine; Missouri Reisling; Mills; Marion X Centennial (white); Mary's Favorite; Mary; Monroe; Minnehaha; Moore's No. 146; Moore's No. 210; Moore's No. 158; Moore's Nos. 207; Moore's No. 221; Moore's No. 245; Moore's No. 24; Moore's No. 23; Moore's No. 234; Moore's No. 216; Moore's No. 55; Moore's No. 207; Moore's No. 160; Moore's No. 247; Moore's No. 228; Moore's No. 252; Moore's No. 166; Moore's No. 211; Moore's No. 235; Moore's No. 250; Moore's No. 150; Moore's Concord; Mammoth Sage; Moore's Early.

No. 8. Con. X Vulpina; No. 36; Niagara; Northern Muscadine; Noah; No. 3 Con. X Vulpina; Nectar; No. 13; No. 10 Con. X Vulpina; No. 19 Station; No. 20; Norton's; Norton's Virginia; Norwood; No Name; Niagara Sport (white); Norfolk Muscat.

Olita; Oporto; Owasso; Othello.

Peabody; Perkins; Peter Wiley; Paradox, Pocklington, Poughkeepsie Red; Prentiss; Pure Labrusca; Profitable; Paragon.

Rutland; Rebecca; Red Bird; Rochester; Requa; Reisling; Roscoe; Rogers No. 13; Red Eagle; Rogers No. 5; Rustler; Rommel; Red Seedling; Ricketts No. 101; Rogers No. 101; Rogers No. 33; Rogers No. 21; Rogers No. 39; Rogers No. 11; Rogers No. 24; Rogers No. 41; Red Bird; Salem; Senesqua; Shelby; Standard; Seedling No. 1; Seedling No. 2; Stacy's Favorite; Seedling (B. B. Welsh); Secretary; Station No. 9.

Telegraph; Taylor; Takland; Triumph; Tokalon.

Unknown; Ulster Prolific; Unknown (m); Unknown Rogers Hybrid; Unknown (c); Unknown (p); Unknown (o); Unknown (F); Unknown (J); Unknown; Unknown (sent to the station as Gaertner); Uhland; Unknown; Unknown (g).

Vergennes; Victoria; Vitis Solonis; Vitis Rupestris; Vitis Doaniana; Vitis Solonis (son); Vitis Rupestris.

Worden; White Jewell; Winchell; Wyoming Red; White Mountain Rose; Wilder; White Clinton; Worden; Woodruff Red; Walter; Wild; White Victor; White Ann Arbor; White Seedling; Worden Seedling.

Yonkers Honey Dew.

Zinnia.

## WINES.

### INDIVIDUAL EXHIBITS.

Pleasant Valley Wine Co., Rheims; Urbana Wine Co., Urbana; H. T. Devey & Son, New York City; Lake Keuka Wine Co., Hammondsport; Hammondsport Wine Co., Hammondsport; Brotherhood Wine Co., Washingtonville; Brocton Wine Cellars, Brocton; Irondequoit Wine Co., Rochester; Hammondsport Vintage Co., Penn Yan.

### EXHIBITS IN THE STATE COLLECTION.

H. T. & J. D. Henderson, Himrods; Germania Wine Cellars, Hammondsport; Empire State Wine Co., Penn Yan; Crescent Wine Co., Hammondsport; Geo.

Miller, Bristol Springs; J. T. Thompson, Oneida; R. D. Fuller & Skinner, Portland; Helvetia Wine Cellar, Keuka.

EXHIBITS ON MAIN FLOOR.

Brotherhood Wine Co.; H. T. Devey & Son; Urbana Wine Co.; Pleasant Valley Wine Co.; Hammondsport Vintage Co.

VARIETIES ON EXHIBITION.

Brotherhood Wine Company.— Class 126, Sweet Delaware; Regina; Imperial Tokay; Sweet Catawba; Sauterne; Iona (sweet); Iona (dry); Old Golden Delaware; Cabinet Tokay; Tokay; Dry Catawba; Angelica; Muscatelle; Riesling; Jerusalem Altar Wine. Class 127, Claret "Sunny Side;" Sauterne; Claret "Nortons;" Manebaruzzio; Imported Jerusalem Altar Wine; Standard Communion Wine; Old Medicinal Port, 1862; Ex. Old Brocton Port, 1872; South Shore Port, 1879; Old Dry Sherry, 1869; Madeira. Class 129, Emerson's Extra Dry Champagne; Emerson's Brut. Champagne. Class 131, Pure Grape Brandy; Old Brocton Brandy; Fine Old Cognac.

Messrs. H. T. Dewey & Sons.— Class 126, Dry Catawba; Sweet Catawba; Delaware; Iona; Old Angelica. Class 127, Burgunda; Ives' Claret; Dewey's Port; Golden Tokay; Sauterne; Norton's; Columbia. Class 128, Sherry; 1862 Port. Class 129, Champagne "Special Sec." Class 131, Brandy.

Urbana Wine Company.— Class 126, Dry Catawba; Sweet Catawba; Tokay. Class 127, Claret "St. Ives." Class 128, Port "Old." Class 129, Champagne, Gold Seal, "Extra Dry;" Champagne, Gold Seal, "Special Dry;" Champagne, Gold Seal, "Brut." Class 131, Brandy. (Also a fine exhibit of grapes used in the manufacture of their wines.)

Pleasant Valley Wine Company.— Class 126, Dry Catawba; Sweet Catawba. Class 127, Claret. Class 128, Port. Class 129, Champagne, Great Western, "Extra Dry;" Champagne, Great Western, "Special Dry;" Champagne, Carte Blanche. Class 131, Brandy. (Also a fine exhibition of grapes on wine space showing the varieties from which its wines are made.)

Hammondsport Wine Company.— Class 126, Old White Tokay; Sauterne; Angelica; Catawba Cream; Pale Sweet Catawba; Golden Sweet Catawba; Special Sweet Catawba; Extra Dry Catawba. Class 127, Claret, "Red Blend;" Claret, "Cape May;" Sweet Isabella; Sweet Concord. Class 128, Sherry; Private Stock Sherry; Highland Port; Empire Port; Special Port. Class 129, Champagne, "Golden Age. Class 131, Brandy.

INDIVIDUAL EXHIBITS IN THE GALLERY.

Lake Keuka Wine Company.— Class 126, Dry Catawba; Sweet Catawba; Angelica. Class 127, Sweet Catawba; Claret. Class 128, Sherry; Port. Class 129, Champagne, "L. K. W;" Champagne, "Keuka." Class 131, Brandy.

Brocton Wine Cellars— Class 126, Salem, 1870; Dry Catawba, 1887; Sweet Iona; Dry Iona, 1875; Sweet Delaware, 1864; Sweet Catawba, 1880; Regina, 1875; Diana, 1862; Niagara, 1885. Class 127, Claret, 1880; Burgundy, 1876. Class 128, Fine Old Sherry, 1872; Sherry; Old Port, 1870; Brocton Port, 1876; Concord Port, 1885; Sunny Side Port. Class 131, Brandy, Extra Old Grape; Brandy, Fine Old; Brandy, Blackberry; Brandy, Cherry; Brandy, Apple.

Hammondsport Vintage Company.— Class 126, Dry Catawba; Catawba Cream; Tokay; Angelica; Sweet Catawba, Riesling. Class 127, Claret; Sweet Isabella. Class 128, Port; Sherry. Class 129, Champagne — La Breton Sec.

The collective exhibit occupied two spaces, one on the main floor and one in the gallery, the exhibit in the gallery being devoted to wines, and the one on the main floor mainly to brandies.

The exhibit was composed as follows:

H. T. & J. D. Henderson.— Class 126, Dry Catawba; Sweet Catawba. Class 128, Sherry.

Germania Wine Company.— Class 126, Elvira; Delaware; Riesling. Class 129, Champagne "Excelsior;" Champagne "Imperial Sec." Class 131, Catawba Grape Brandy.

Helvetia Wine Cellars.— Class 126, Dry Catawba; Sweet Catawba. Class 128, Sherry.

Empire State Wine Company.— Class 126, Iona; Angelica; Dry Catawba; Sweet Catawba; Tokay. Class 127, Claret. Class 128, Sherry; Port. Class 131, Brandy.

Crescent Wine Company.—Class 126, Dry Catawba; Sweet Catawba; Tokay. Class 128, Sherry; Port. Class 131, Brandy.

George Miller.—Class 126, Dry Catawba. Class 128, Port.

R. D. Fuller & Skinner.—Class 126, Fine Old Regina; Old Sweet Iona, 1866; Diana, 1866; Sweet Catawba, 1882; Fine Old Dry Catawba, 1878; Sweet Niagara, 1885; Old Isabella, 1870. Class 127, Claret. Class 128, Old Community Port, 1866; Old Chautauqua Port, 1872; Fine Old Port, 1878; Old Sweet Sherry, 1878; Old Dry Sherry, 1878. Class 131, Brandy.

A very creditable exhibition was made of wines other than those made from grapes; they were placed in class 143. While this was manifestly wrong, it was

VITICULTURE, Brandy Exhibit

submitted to because no class had been made for them.

The exhibitors were:

R. D. Fuller & Skinner.—Class 143, Currant Wine; Elderberry Wine.

J. T. Thompson.—Columbia Raspberry Wine.

Brotherhood Wine Company.—Blackberry Wine.

Broeton Wine Cellars. — Blackberry Wine.

In the exhibition of unfermented grape juice six manufacturers sent exhibits. This is a comparatively new product of the grape, being non-alcoholic, representing all there is in the grape except the skin and seeds. This product belongs without question to viticulture, but, as no class was made for it, it was sent to class 143. Exhibits were made by:

G. C. & W. C. Snow, Penn Yan.

H. T. Dewey & Sons, New York city.

Helvetia Wine Cellars, Keuka.

C. J. Boldridge, Kendaia.

M. B. Gleason, Westfield.

Brocton Wine Cellars, Broeton.

All the brandy was entered in class 131. The following names are exhibitors of brandy alone:

T. S. Vandevoort, Canandaigua.—Grape Brandy; Cider Brandy.

W. M. Smith, Bath.—Cider Brandy.

B. Garlock & Son, Newark.—Cider Brandy.

Abraham Garlock, Phelps. — Cider Brandy.

J. P. Fletzner, Rochester. — Grape Brandy; Cider Brandy.

D. A. Shaffer, Montgomery. — Cider Brandy.

J. L. Sayer & Son, Worrick.—Cider Brandy, 1852.

Chas. E. Wisner, Worrick. — Cider Brandy, 1854.

Warren Sammons, Rosendale. — Cider Brandy.

# POMOLOGY.

By GEORGE T. POWELL, Ghent, Superintendent.

In the work of preparation for the various State exhibits the department of horticulture was one of the last to be reached. Consequently, before the process of collection was begun, a large quantity of our best fruits for the season of 1892 had already been shipped to home and foreign markets.

## Apples and Pears.

This was notably the case with apples and pears, but a considerable range of varieties was secured, packed and forwarded to cold storage in Chicago. Of the late varieties of pears a collection was made and placed in cold storage in Rochester.

On the first day of May, at the opening of the World's Columbian Exposition, these fruits were brought out of cold storage and there were placed on exhibition 110 varieties of apples and five varieties of pears. The apples opened in excellent condition, even many of those which are considered fall varieties and are not usually held in cold storage. Owing to the unusually cold winter frost penetrated some of the cold storage rooms at Rochester, the temperature settling several degrees below the freezing point, thereby injuring several varieties of pears. On the eleventh day of May, when the judges examined this fruit, there were placed before them 101 varieties of apples, as follows:

Newton Pippin; Fallawater; Hubbardston's Nousuch; Lady; Roan's White Crab; Cherry Crab; Spice; Granite Beauty; Black; Fall Seek-no-Further; Waxen; Red Canada; Boiken; Red Streak; Jennetting; Tallman Sweet; Pennock; Sweet Seek-no-Further; Acubifolia Crab; Grosfarros; Goldflesh Crab; Pomme Gris; Rambo; Stone; Flushing Spitzenberg; Salome; Block Apple; Moore's Greening; Ragan's Red; Blue Pearmain; Sweet Winter Greening; Wagener; Yellow Belle-Fleur; Rock; McIntosh Red; Pickman Pippin; Vermont Greening; Ben Davis; Oxnead Pearmain; Egg Top; Pumpkin Russet; English Russet; Golden Streak; Northern Spy; Stark; Bottle Greening; Jonathan; Vandevere; Baldwin; Broad End; Burr's Winter Sweet; Tuft's Baldwin; Hollow Crown; Smith's Cider; Fall Pippin; Pewaukee; Bethlehemite; Lyon's Sweet; Gilpin; Esopus Spitzenberg; Peck's Pleasant; Rum; Cranberry; Hog Island Sweet; Gilliflower; Campfield; Honey Sweet; Zane's Greening; R. I. Greening. Egyptian Russet; Leather Coat Russet; Ortley; Cabashea; Bush's Beauty; Gloria Mundi; Goldflesh Strawberry; Newark King; King of Tompkins Co.; Swaar; Thomas; Randall's Red Winter; Foster; White Belle-Fleur; Hendricks' Sweet; Sweet Pearmain; Lyscom; Cooper's Market; Scott's Winter; White Winter Pearmain; Winter Strawberry; Twenty Ounce; Canada Pippin; Pound Sweet; Norton's Red; Romanite; Seek-no-Further; Golden Russet; Belle et Bonne; Roxbury Russet; Red Romanite; Dyer.

There were also shown five varieties of pears as follows:

Columbia; Josephine de Malines; Winter Nelis; Pound; Beurre Gris.

There were shown one plate of Orange quinces which had been kept during these months in cold storage and were in fairly good condition.

This fruit was kept on exhibition continuously and about every five days all specimens showing defects by loss of color and decay were

removed and replaced by other specimens. The weather during the greater portion of May was unusually cold, which facilitated the longer keeping of the fruit after coming out of cold storage. The subject of cold storage for keeping fruits is one which has received a great deal of attention and study, and some very valuable lessons of vital importance to fruit growers and to the consumers of fruit have been learned during the exposition. In getting up the supply of apples which were to be shown after the first of May, it was essential that the fruit should be so handled as to be in the best possible condition for exhibition. A large proportion of the fruit when being collected was wrapped in tissue paper and placed in barrels and half-barrels. This plan was contrary to the general practice in putting up fruit for cold storage, and was against the judgment of many practical and experienced cold storage men, who claimed that the paper wrapping would be a disadvantage to the good keeping of the fruit. However, the experiment was tried, and the larger portion of the fruit was wrapped, shipped to Chicago, and was kept in cold storage from November until the opening of the exposition, when the different varieties of apples were taken out. In every instance the wrapped fruit opened in most excellent condition. The flavor was well maintained, the bloom on the fruit was well preserved, and many barrels of apples did not show a defective specimen, while the few packages that were not wrapped, of the same varieties and collected from the same localities, showed a loss of from three to five per cent. The paper seemed to have the effect of absorbing moisture, and where an apple decayed, prevented the contagion of decay. Wrapping of this fruit was done on the supposition that the exclusion of the air from the fruit would secure its better preservation and safe transportation.

It has been quite surprising to note the length of time which apples have kept in good condition upon the exhibition shelves after coming from cold storage. After the first sweating period had passed and the fruit had been rubbed, as it had to be every day, to remove the dust that settled upon it, the fruit showed remarkable keeping qualities. Coming from a temperature of thirty-four degrees in cold storage, many varieties of apples have been kept in good condition for a period of four weeks. Instead of the fruit decaying in a very short time, as had been the general impression, the rubbing process had the effect of closing the pores of the skin, and the fruit stood week after week and gradually dried and shriveled instead of decaying. Among the varieties that have shown remarkable keeping qualities have been the Pound Sweet and Fall Pippin, usually ripe in the fall and not kept far beyond the holidays at the latest, each being in perfect condition while shown throughout the month of May and up to the fifth of June. Tompkins County King, another variety which is at its best in February, was kept on exhibition in the finest condition, maintaining its color, flavor and solidity until July fifteenth. Boiken, Granite Beauty, Blue Pearmain, Tallman Sweet, have been shown continuously from the first day of May until the first day of July, without any change made upon the plates, all having been previously in cold storage, while twenty-five other varieties have kept nearly as well. Newtown Pip-

pins have maintained fine quality after coming from cold storage, while one shipment was received that had never been in a cold room and were shown up to July first. The Fallawater, a fine apple in appearance, has been least able to stand long keeping of any variety that has been shown. It has invariably come from cold storage room with the skin discolored from scald, and scarcely a perfect specimen could be obtained.

There is no doubt that most of our winter varieties of apples, if selected with greater care and put into small packages with the least possible handling and bruising, can be held and placed upon the market at a much later period than has generally been supposed without the aid of refrigeration. It has been quite successfully proved that a low degree of temperature is not so essential as has been supposed with fruit that has been very carefully handled, for during a considerable period of time, apples in storehouse on the exposition grounds were kept for many days in succession at a temperature of fifty-five degrees and still the fruit kept remarkably well. Quite as much depends upon extreme care in handling fruit when it is a question of prolonging its keeping qualities as upon a low degree of temperature.

The holding of pears in cold storage for a long period of time is attended with a greater loss of fine flavor than with apples. Personal experience in holding Bartlett, Clapp's Favorite, Seckel, and late summer and early autumn varieties seems to demonstrate that they cannot be held in temperature of thirty-six degrees longer than six weeks from the time of going into cold storage without losing much of their fine flavor. The Anjou, Bosc and Lawrence may be kept for a longer period of time and maintain good flavor. Winter Nelis, Beurre Gris and Josephine de Malines were opened on the first day of May and were held until the middle of June and the flavor was well maintained, particularly in the case of the first named. On May twenty-second ten varieties of pears were placed upon exhibition, forwarded by Ellwanger & Barry, of Rochester, N. Y., consisting of Black Worcester, Provost, Bergamot Royal d'Hiver, Doyenne Jamin, Clapp's No. 64, Bergamot Heitrich, Duchess de Bordeaux, Fox No. 7, Madame Hentin and P. Barry. From the care which this fruit had received from the time it was taken from the trees until placed on the shelves at the exposition, these varieties which had never been in cold storage were successfully shown. They were held up to the twenty-fifth of June, while on the fourth of July one variety, Pound, which had been on exhibition since the first of May, was still shown.

As soon as the autumn fruits began to appear the greatness of New York as a horticultural State was quickly recognized in the strong leading position that was taken by the State in every class of fruits as they came in their season. When the Cold Storage Building at Jackson Park was burned on July ninth, the entire supply of apples and pears which were stored therein were lost. Additional space had been secured, to be occupied with these cold storage supplies of 1892, during July and August and until the September fruits could be placed on exhibition. During this period it was very difficult to maintain the exhibit and hold it up to its highest degree of excellence, by replacing

POMOLOGICAL EXHIBIT

with fresh, sound specimens during these two most difficult months, but the excellent keeping qualities of New York apples were here put to a test never before equaled, and they held over this most trying period of hot weather in a condition that was a surprise and a revelation to all pomologists.

On August first there were shown in good condition thirty varieties of apples, the most of which were taken from the Cold Storage Building on the day it was burned. They were the following kinds:

Roxbury Russet; Golden Russet; Egyptian Russet; English Russet; Pomme Gris; Jonathan; Peck's Pleasant; Red Canada; King; Hoopes; Pennock; Spy; Swaar; R. I. Greening; Stark; Ben Davis; Seek-no-Further; Newtown Pippin; Campfield; Lady Sweet; Granite Beauty; Baldwin; Cooper's Market; Stone; Esopus Spitzenberg; Lyon's Sweet; Sweet Seek-no-Further; Thomas; Wagener; Fallawater.

These were held, if not in the best condition, surprisingly well through the greater part of August.

On September first a very severe wind storm swept over the State which did immense damage, blowing off great quantities of the finest fruit in those sections where it was the most abundant, preventing exhibitors from forwarding choice specimens of many varieties that were not shown at all. The earliest display of apples came from the Hudson river section, several leading apple growers contributing liberally through the entire autumn exhibit. On September twenty-fifth the Orange County Agricultural Society exhibited twenty-seven varieties of apples and five varieties of pears. On the twenty-seventh the Western New York Horticultural Society forwarded its exhibit from the State fair, of eighty-five varieties of apples and twenty-four varieties of pears. The Central New York Horticultural Society also forwarded on the same date its exhibit from the State fair of eighty-three varieties of apples and fifty-six varieties of pears. The Orleans County Agricultural Society forwarded on the twenty-seventh the exhibit from its county fair of forty varieties of apples. The Brockport Union Agricultural Society on October seventh sent from its fair thirty-seven varieties of apples and fifteen varieties of pears. The Chautauqua Horticultural Society forwarded on September twenty-sixth, from its Horticultural Institute and Fruit Show, twenty-one varieties of apples and eight varieties of pears. These were not sent to represent full county or society exhibits, but as contributions to the State exhibit. The New York Experiment Station exhibited eighty-nine varieties of apples from its experimental orchards, which illustrated in an admirable manner the results of scientific culture. There were also a large number of individual contributors from Northern, Central and Western New York, who sent large numbers of varieties of apples, and rendered valuable assistance in maintaining a very superior display of this kind of fruit to the close of the exposition.

A feature of the apple exhibit was a display made by G. T. Powell, of Ghent, showing the value of spraying the fruit with Bordeaux mixture to prevent the attack of "apple scab." The spores of this fungus attach themselves to the fruit, causing a scab to form making a black patch on the surface, which often prevents the further growth of the apple, making it deformed, unsightly and worthless.

The specimens shown which were particularly subject to the attack of "apple scab" were Cranberry Pippin, Fameuse and Fall Strawberry, They had been sprayed four times with Bordeaux mixture, made of four pounds of sulphate of copper and three pounds of lime in fifty gallons of water. The fruit was entirely clear of the fungous spots, and of exceedingly high, beautiful color. With the extension of apple orchards, this fungous disease is getting a stronghold in some sections, and to maintain the high reputation of New York apples in our Southern and Western markets and particularly in English markets, the uit must be kept clear in color, and free from the effects of this blight.

Among some of the most valuable summer varieties shown were Early Strawberry, Early Sweet Bough, Red Astrachan and Golden Sweet; of the autumn varieties were Chenango Strawberry, Duchess of Oldenburgh, Fall Pippin, Fall Wine, Gravenstein, Maiden's Blush, Richards' Graft, Rome Beauty and Porter. Among the very large number of winter varieties shown, the following may be considered as possessing the very finest qualities as regards flavor, size, color and keeping, all desirable for home market and the most of them popular in foreign markets: Fameuse, R. I. Greening, Bailey's Sweet, Baldwin, Tompkins County King, Hubbardston's Nonsuch, Jonathan, Lady's Sweet, Peck's Pleasant, Northern Spy, Red Canada, Sutton Beauty, Twenty Ounce, Wagener, Wealthy, Wine Sap, Newtown Pippin, English Russet, Roxbury Russet and Boiken.

New York lies in the most favored apple belt in the United States. The exceedingly high flavor of the fruit is recognized in all markets, and the future promises much to those who devote land to the culture of the apple, and bring to its production the skill, intelligence and care that is required to produce high grade fruit.

On August twelfth Messrs. Ellwanger & Barry, of Rochester, placed on exhibition sixteen varieties of summer pears; on August twenty-sixth, twenty-one varieties; on September twelfth, seventy-five varieties; on September twenty-sixth, fifty varieties and on October fourth, one hundred and twenty-five varieties. On September twenty-sixth the Central New York Horticultural Society forwarded twenty-one varieties and on October fourth, thirty-four varieties, while, on October fourth, the Western New York Horticultural Society forwarded twenty-three varieties. These large exhibits, together with others from different parts of the State, made a very large and attractive display which was carefully studied by exhibitors from several States and by visitors from other countries.

Among some of the varieties requiring special mention is first of all the "Bartlett," the best known and most popular of all pears. It originated in England, was propagated by a grower by the name of Williams, and the pear is called in England "Williams' Bonchretien." In 1799 a tree was sent to Enoch Bartlett, near Boston, who introduced the pear in this country, and it has since been known as the "Bartlett" pear. The "Seckel" is without question the embodiment of the highest perfection of fine flavor in the pear, and it is of American origin, as it was first known on a farm near Philadelphia about 1812 and took its name from the owner of the farm. While the "Seckel" is known as a small

pear in size, there were remarkable specimens shown that were as large as good-sized "Sheldons." The "Seckel" requires very heavy fertilizing as it is a short-jointed, slow-growing tree, and under high culture its size can be doubled. The "Anjou" is one of the choicest of the late varieties, is of French origin and was one of the most valuable on exhibition, worthy of a place in every garden and orchard. "Bosc" was shown in greatest perfection and is a pear of rare quality. "Lawrence," "Winter Nelis" and "Jones" were other late and winter varieties of excellent flavor, which, with still other newer varieties, prolong the season for the enjoyment of this fruit. The finest quality and highest flavor are found in the pears upon dwarf trees, which are formed by budding desired varieties upon quince roots. The "Angouleme," which is especially fine as a dwarf, was shown in great perfection.

One of the most instructive lessons in connection with the pear exhibit was furnished by the New York State Experiment Station, showing the effects of spraying with "Bordeaux mixture" for the pear scab, which is a fungous blight upon the fruit that injures it for sale or use. In July two branches full of half-grown fruit were taken from the "Seckel" pear trees, one having been sprayed, the other not. The fruit on the unsprayed branch was badly affected with the fungus known as "scab," and fifty per cent of the fruit had fallen off in transportation. The fruit on the branch from the sprayed tree was clear in color and largely free from the fungous spots, while not five per cent of the fruit fell off in transportation. In October the station sent another exhibit of sprayed and unsprayed "Seckels" and "White Doyenne" pears, which was very marked in favor of the sprayed fruit, which was good, while the unsprayed was worthless. This fruit was sprayed with a weak solution of "Bordeaux mixture," one pound of sulphate of copper only being used in eleven gallons of water. The "Seckel" was sprayed with this five times, and the "White Doyennes" were treated in the same manner, except that the first spraying of the following treatment was omitted:

1. When the buds began to open.
2. Just as the blossoms were ready to open.
3. Immediately after the blossoms fell.
4. About two weeks after the third treatment.
5. About two weeks after the fourth treatment.

To the last three treatments Paris green was added — one ounce to eleven gallons of the mixture.

A "special award" was given this exhibit for its valuable educational features, the lesson being carefully studied by many practical and scientific pomologists.

### STRAWBERRIES.

To make a strawberry exhibit at so great a distance from the place where the fruit was grown seemed like a very difficult undertaking; but early in the spring a large number of varieties of plants were taken from the ground, placed in pots, and after they had bloomed, and the fruit was well set, they were shipped on to the exposition, and for nearly two months were kept on exhibition. This proved to be a very

interesting and valuable object lesson, as showing the difference in the character of the varieties, some being strong and vigorous in their habits of growth, while others were only medium in these points, and still others weakly and entirely unprofitable for cultivation. The fruit developed on many of the plants showed the characteristics of both plant and fruit, so that they could be studied together. These plants were so arranged that the crosses finely illustrated the parent plants. Dr. Collier, director of the New York Experiment Station, from which a large collection of these plants were sent, speaks of the manner in which the crossing was done, and also gives a description of seedlings which will be of interest to fruit growers as showing the defects which led to the discarding of the varieties mentioned as not profitable for propagation or cultivation. He says: "The seedling strawberry plants from this station, exhibited as potted plants, are from crosses made by covering pistillate plants with something to exclude foreign pollen while the plants were in blossom. Pollen from the desired male parent was then applied to the open blossoms and the plant again covered till the fruit ripened. The seed was sown in flats and the plants were transplanted when of sufficient size. The work of crossing is still continued, but plants from later crosses than those above named have not yet fruited. All varieties exhibited at Chicago have fruited the second season. From 375 to 400 of these seedlings have been discarded this season, and about fifty have been retained for further testing. If from these fifty varieties we develop something worthy of extensive culture, though it be but one variety, we shall feel much gratified."

The parentage of the station's seedlings, exhibited at Chicago, is as follows: Crescent X Lennig's White produced Nos. 77, 243, 246; Crescent X Dawley White produced Nos. 95, 291; Crescent X Sharpless produced Nos. 278, 120, 127, 142, 143, 271, 272, 277; Crescent X Old Ironclad produced No. 227; Daisy X Lennig's White produced No. 285; Johnson's Late X Dawley White produced No. 255; Johnson's Late X Lennig's White produced Nos. 171, 181, 190, 258, 262, 256, 267; Johnson's Late X Sharpless produced Nos. 198, 208, 212, 294; Lida X Lennig's White produced Nos. 146, 293.

The following description of these varieties are taken from the station field notes for 1892 and 1893:

No. 77, Station.— Crescent X Lennig's White: Fruit medium to large and of good quality, but too soft to ship well. Plants productive. Discarded 1893.

No. 95, Station.— Crescent X Dawley: P. Fruit medium to large, varying in shape from conical to coxcombed — of very good quality. Plants vigorous and productive. To be tested for a late berry.

No. 120, Station.— Crescent X Sharpless: S. Fruit medium early, size medium to large, color good, somewhat acid, good quality, productive. Test for market.

No. 127, Station.— Crescent X Sharpless: S. Fruit medium size, very good quality, dark color, deficient in foliage. Discarded 1893.

No. 142, Station.— Crescent X Sharpless: P. Fruit medium to large, fair quality, good color, deficient in foliage. Discarded 1893.

No. 143, Station.— Crescent X Sharpless: P. Fruit variable, medium to large, productive, poor quality, soft, deficient in foliage. Discarded 1893.

No. 146, Station.— Lida X Lennig's White: S. A late berry, medium size, white flesh, very good quality, not productive. To be tested for amateur use.

No. 171, Station.— Johnson's Late X Lennig's White: P. A late berry, medium size, good quality, soft, resembling the mother plant in foliage and type of fruit. Discarded 1893.

No. 181, Station.— Johnson's Late X

POMOLOGICAL EXHIBIT, West Section

Lennig's White: P. Fruit medium size and of good quality, plant productive. Discarded 1893. Not superior to some named varieties.

No. 190, Station.— Johnson's Late X Lennig's White: P. Fruit of Lennig's White type, medium size, good quality. To be tested for amateur use.

No. 198, Station.— Johnson's Late X Sharpless: P. Fruit late, medium to large, borne on long strong stems, light red color, firm, fair quality, productive. To be tested for late market.

No. 208, Station.— Johnson's Late X Sharpless: S. Fruit large, late, of good quality and productive. Test for late market.

No. 212, Station.— Johnson's Late X Sharpless: P. Medium size, of good color, shape and flavor. Rank foliage, of Sharpless type, but fruit bears more resemblance to Johnson's Late, though of better color; plants productive. To be tested for late market.

No. 246, Station.— Crescent X Lennig's White: S. Fruit medium, of very good quality, but very soft. Discarded 1893.

No. 255, Station.— Johnson's Late X Dawley: S. Fruit medium or above, short stem, dark red color, very good quality. Plants productive of Johnson's Late type; fruit of Dawley type.

No. 258, Station.— Johnson's Late X Lennig's White: S. Fruit large, light colored, late, with frequently an imperfect tip; plants unproductive. Discarded 1893.

No. 262, Station.— Johnson's Late X Lennig's White: P. Fruit late, of Lennig's White type, small to medium and of good quality; foliage of Johnson's Late type. Discarded 1893.

No. 266, Station.— Johnson's Late X Lennig's White: P. Fruit midseason, medium size, regular shape, beautiful creamy pink color, fair quality.

No. 267, Station.— Johnson's Late X Lennig's White: P. Fruit very late, medium or below, pale crimson, good quality, unproductive. Discarded 1893.

No. 271, Station.— Crescent X Sharpless: S. Fruit medium size, poor quality. Discarded 1893.

No. 272, Station.— Crescent X Sharpless: S. Fruit small to medium, good quality. Discarded 1893.

No. 277, Station.— Crescent X Sharpless: P. Fruit firm, red, productive but poor in quality. Discarded 1893.

No. 278, Station.— Crescent X Sharpless: S. Fruit large, good quality but soft, plants productive. Discarded 1893.

No. 285, Station.— Daisy X Lennig's White: S. Fruit late, of Lennig's White type but larger, plants unproductive. Discarded 1893.

No. 291, Station.— Crescent X Dawley: P. Fruit medium size, good quality; foliage poor. Discarded 1893.

No. 293, Station.— Lida X Lennig's White: P. Fruit medium to large, conical, good quality, Lennig's White color and white flesh. To be tested for amateur use.

No. 294, Station.— Johnson's Late X Sharpless: P. Fruit late, large, firm, fair quality, resembling Sharpless in color; foliage of Johnson's Late type. To be tested for late market.

It may be well to observe that the dark, leathery foliage of Johnson's Late is a marked characteristic of its descendants, whatever the plant used for the male parent. In all crosses where the Sharpless was used as the male parent a very large percentage of the seedlings produced have been thought worthy of further testing. No doubt many, and perhaps all of these varieties, by further testing, will develop defects serious enough to cause the variety to be discarded. Yet we have learned that both these varieties, namely, Johnson's Late and Sharpless, are valuable for crossing to originate new varieties, and some of the most promising of the station's seedlings thus far produced were secured by crossing Johnson's Late and Sharpless.

Several shipments of strawberries were made very successfully from various parts of the State, representing the following varieties:

Bubach, Sharpless, Pearl, Jessie, West Shore, Downing, Bessie, Feight's No. 2, No. 1 Hazelton, No. 9 Townsend, Hoffman, Michel's Early, Van Deman, Haverland, Beder Wood, Smeltzer's Early, Snyder Seedling, Phillips' Seedling, Princess, No. 10 Crosby, Middlefield, Burt, Beverly, Oregon Everbearing, Chair's Favorite, Allen's No. 3, Laxton's Noble, Eureka, No. 1 Allen, Gov. Hoard, Gandy, Cumberland Triumph, Lovett's Early, Lennig's White, McPartland,

Parker Earle, Iowa Beauty, Lady Rusk, Swindle, Lovett, Long John, Jewel, Leader, Southard, Crawford, Accomac, Great Pacific, Stayman's No. 1, Auburn, Muskingum, Middlefield, Mystic, Windsor Chief, Gillespie, Miami, Eclipse, Beebe, Beauty, Phillips' No. 1, Dayton, Cloud, Sadie, Saunders, Woolverton, Edgar Queen, Mrs. Cleveland, California, Edwards' Favorite, Warfield, Shuster's Gem, Morning View, Gen. Putnam, Waldron, Wilson, Standard, Manchester, Anna Forrest, Farnsworth, Hermit, Enhance, Jucunda Imp., No. 205 Station, Oliver, Manchester, Townsend's No. 2, Cameronian, Oregon, Walton, Mark.

The strawberry exhibit enabled horticulturists to see the choice varieties of plants brought together at one point, and also the fruits of the same varieties, and was thus a study having a great deal of interest. One exhibit was made by L. J. Farmer, of Pulaski, N. Y., consisting of sixty-seven varieties, which were received in perfect order, a fact that was very surprising, when it is remembered that in so large a variety there were some that were not regarded as having good shipping qualities. The manner in which the fruit was shipped was different from anything ever before attempted. Crates were made with pasteboard partitions two inches square by two and one-fourth inches deep, in the bottom of which was placed white glazed cotton wadding, and one berry was placed in each compartment. The crates were shipped to exhibitors, who filled them and forwarded to the exposition. It has been thought that ventilation is a very important feature in successful shipment of berries, but in this instance the crates were made tight, the fruit was placed in these closed partitions, and was kept as much as possible from the air. After shipping this fruit, in some instances a thousand miles, it was placed on plates and held, in many cases, for eight days after being received or ten days from the time of picking. Some new questions arise as the result of the work in these experiments. It may be asked whether these delicate fruits cannot be transported very much longer distances than has heretofore been supposed possible, and whether ventilation is essential for successful transport. The use of cotton or some other, possibly cheaper, material, will be brought into use as furnishing means for the absorption of moisture, thus enabling the fruit to stand up or keep for a longer period.

The berries did not seem to decay, but rather dried, when on exhibition. The outer cells of the strawberry are very delicate, and when massed together become slightly bruised, thus allowing the escape of the juice of the fruit, after which decay will follow within a very few hours. The cotton lining seemed to absorb the moisture which naturally is given off from fruit even when not bruised. The cells closed, hence the fruit dried rather than decayed, which is the explanation of the remarkable length of time which many of these varieties were kept. In this manner of shipping there does not seem to be so much difference in the keeping qualities of the different varieties. Of the sixty-seven varieties received from Mr. Farmer, at the end of six days the entire number were showing well upon the plates. On the seventh day a few varieties had become discolored and were removed. Such varieties as Downing, Cumberland and Sharpless, considered soft and not well adapted to shipping and holding, were among the many other soft varieties that held well up to the seventh day. On the ninth day from

the time they were received and the eleventh from the day they were picked, the following varieties were shown in a fairly good condition: Pearl, Van Deman, Beder Wood, Hoffman, Jessie, Burt, Gandy, Middlefield, Eclipse, Haverland, Eureka, Gillespie, Windsor Chief, Miami, Cloud, Saunders, Michel's, Early Dayton, Mrs. Cleveland, Mystic, Auburn, Beauty, Phillips' No. 1, Muskingum, Woolverton, Bubach.

The culture of the strawberry extends over a wide range of territory, the market being first supplied from Long Island, followed by the Hudson river fruit, Central New York, Oswego and Western New York counties. All these localities furnished fruit for the exposition. So great has become the demand for strawberries, not only in large cities, but in every town and hamlet, that even with the large increase in acreage of the past ten years, the supply is not equal to the demand. Thousands of acres of land in New York now being used for cereal crops grown in competition with newer cheap western land, with a margin for profit so narrow that but little can be realized, might be given to the culture of this fruit. Canneries might be established, and in addition to extending its consumption over a much longer period, any surplus product would find ready buyers at profitable prices in foreign markets, where American canned fruits are meeting with much favor.

## GOOSEBERRIES.

Before the strawberry exhibit was closed shipments of gooseberries were received from several exhibitors. Gooseberry culture has only recently taken a start. It has generally been considered a very uncertain kind of fruit to raise, our climate being hot and accompanied by heavy dews. The gooseberry has been subject to very serious attacks of mildew which has made the culture of the finer English varieties unprofitable, but the aid of science has been brought to the fruit grower and it is now well understood that by beginning early in the season, spraying the vines thoroughly and continuously for several weeks with sulphide of potassium, the choicest English varieties can be quite successfully grown. In addition to spraying, an important fact to fruit growers is that the soil needs to be shaded and kept cool, which in some instances has been done by sowing buckwheat or oats to cover the ground during the hottest periods of June and early July, until after the fruit is well matured.

There is a very rapidly growing demand for the gooseberry, it being used by many hotels and private families in place of cranberries with meats. The gooseberry is being extensively canned and made into jams, and is a fruit which once sucessfully cultivated, has considerable commercial value. The extent to which this fruit is already being cultivated will be observed by the following list of varieties which have been placed on exhibition: Crown Bob, Crystal, Downing, Dominion, Houghton, Mountain Seedling, Pale Red, Payallup, Smith, Triumph, Wellington Glory, Whitesmith, Dagwell No. 1, Roesch, Golden Prolific, Pearl, The Auburn, Industry, and in addition 160 new seedling varieties.

On July nineteenth there was received a shipment of gooseberries from the New York Experiment Station which was one of the most

remarkable exhibits made at the exposition in the line of small fruits. The "Industry" gooseberry was shown as representing the parentage, with twenty-eight of its seedlings. The fruit was sent in a ripening condition, and with its rich colors, in full maturity and large size, presented a very attractive appearance. The varieties worthy of very special mention were Nos. 1, 26, 10, 17, which were red in color, fine in size, and particularly sprightly in flavor. No. 23 had an exceedingly rich yellow color, was large in size and one of the finest flavored varieties of the entire number. Nos. 2 and 22 were green in color, very large, and quite profusely covered with spines. Nos. 5, 7, 26, 10 and 17 were all exceedingly fine in size and appearance. Nos. 18 and 13 were red in color, very large in size, and heavily covered with spines. It was a fact observed by many horticulturists that a large number of these seedling varieties appeared to excel in point of size its parent, the "Industry." A chance seedling, the "Argyle," found growing in a pasture upon the farm of F. Argyle, Kern, Yates county, attracted special attention. It has seemed to successfully resist mildew. The plant is vigorous and strong in growth, as shown by a photograph of a three years' old plant heavily loaded with fine, large berries, light green in color and uniformly large. On July twenty-seventh, another seedling was secured from Nicholas Phalen, Marlboro, Orange county, of fine promise, being large and light green in color. The original plant was seen later, growing in its native place, and it was vigorous in its growth, with dark green, luxuriant foliage.

The New York Experiment Station made the most extensive exhibit of English and American varieties with their seedlings, now being tested, that was ever before seen in our country, and probably in any other, showing 170 different kinds. The exhibit was carefully studied by horticultural experts of every State and by those of foreign countries, as a work of high scientific merit.

## CURRANTS.

One of the most valuable on the list of small fruits is the currant. It is the first to be used in the season in its green state, and is one of the longest to remain after ripening upon the bushes.

This fruit was shown in its very finest condition, and continuously so for a long time, with the following varieties: White Dutch, Cherry, Fay's Prolific, Versailles, Eclipse, Columbian Red, Gloire des Sablons, Red Dutch, Victoria, White Grape, Champion, Mills' Seedling Cluster, North Star, London Red, Ruby Castle, Prince Albert, Wilder, Black Naples, Ogden's Black Grape, Saunders' No. 1, Lee's Black Prolific, Baldwin's Black, Common Black or Black English, Saunders' No. 2 and Prince of Wales, besides a large number of new seedling varieties.

The following varieties, as described, represent in this class of fruit wide variation in culture and quality, but all of which having points of excellence, and most of which are valuable for cultivation:

Cherry. — A strong growing variety, with stout, erect, short-jointed shoots. No more productive than other currants, but valued for market on account of its size.

La Versaillaise, Versailles, Imperial Red. — Bush vigorous and productive, bunch similar to Cherry but occasionally longer.

POMOLOGICAL EXHIBIT, East Section

Prince Albert. — Fruit large, similar in color to Victoria, late in ripening, productive and valuable.

Red Dutch. — Fruit large, deep red, very productive. One of the best.

Gloire des Sablons. — Unproductive, but remarkable for its striped fruit.

Victoria, Ruby Castle, Red Grape, Houghton Castle.— Fruit as large as Red Dutch, bright red, late and productive. Valuable.

White Dutch.— Not so acid as the red varieties and, therefore, valued for table use. Productive, early and valuable.

White Grape. — Bunches moderately long, berries very large, whitish yellow, sweet and good. Very productive. Branches not so upright as White Dutch.

Fay, Fay's Prolific.— Fruit of largest size and berries remarkably uniform throughout the bunch. Productive and much valued for market.

Eclipse.— New.

Champion.— New. Supposed to be an improvement on the old White Dutch.

Long Red, Short Bunched Red.—A strong upright grower. A good sort, grown for market around London.

A choice collection of new seedling currants was exhibited by Jacob Moore, of Attica, who, in his description of them, says: "They were raised in 1885 from seed cross-fertilized the year before. There were several hundred seedlings in the collection, more than two-thirds of which were from seed of the Cherry currant fertilized by the White Grape. The plants were graded and transplanted, given good cultivation, and in 1887 three seedlings bore fruit about the size of fine shot. The next year the same trio and a small proportion of the others bore fruit of normal size. The variety selected as best in quality that year is designated No. 10 in the following description. In 1889 all of the seedlings produced fruit. Of the trio mentioned but one was retained, No. 10. It was expected that white varieties would be produced from the seed of the White Grape currant, but not until 1889 did a white variety appear, and it remained the only white one among them. There was one flesh-colored variety; there was also a difference in the shade of color of the varieties from seed of both parents, some being light red, some dark red and of intermediate shade. The white variety, though excellent in quality, was dwarf in habit of growth and was not introduced.

The following are descriptions of some of the best varieties from seed fertilized of the White Grape by the Cherry currant:

No. 10.— Berries not quite so large as Cherry currant, but sweeter and better flavored. Clusters short and often hug the branch so closely as to make picking difficult. The bush is a stocky grower and heavy cropper.

No. 70.— Berries slightly larger than the seed parent, thickly borne on long stems; flavor, mild and pleasant. A vigorous grower and profuse bearer.

No. 170.— Berries of the largest size, deep red, acid. Clusters rather short. The plant is a larger, stronger grower than the Cherry and more productive.

No. 200.— Berries large, thickly borne in clusters of medium length, but tart and rich. The bush is a strong, vigorous grower and profuse bearer.

No. 260.— Clusters long, berries large, deep red at maturity, flavor slightly tart, less acid than Cherry. The bush is a sturdy, upright grower and holds its burden of fruit clear from the ground; the stalks stiff holding up the heaviest load of fruit. Blooms late and ripens late. Moderately vigorous and productive at first, but increases both in vigor and productiveness with age and ultimately yields large crops. Valuable late variety.

No. 400.— The fruit stems are long, well filled out with large berries of light red color and pleasant flavor; a vigorous grower and great bearer.

The following varieties are from the seed of the Cherry, fertilized by the White Grape:

No. 180.—Berries of the largest size — full as large as the Cherry currant, agreeable flavor. Although the clusters are usually short, they are long necked, the stems being long between stem and first berries, rendering the picking easy. This variety has more fleshy consistency than the others which enables it to keep and carry better. The plant is a strong grower with large leaves and bears abundantly.

Moore's Dark Red.—Berries nearly as large as the Cherry, dark red, of mild, rich flavor. Clusters of average length borne so thickly as to hide the branches sustaining them. Ripens late; the bush is an erect grower, vigorous and bears a large crop.

No. 280.—Clusters of fair length, well necked; berries large, bright red, with wine flavor when at their best. A vigorous grower and constant bearer of large crops—valuable as a market or garden sort.

No. 420.—Berries large, dark red, good; short bunched and ripens early; bush a stocky grower and yields abundantly.

No. 430.—Bunches medium, compact; berries large and good; a strong irregular grower and heavy bearer. But few were rejected on account of unproductiveness, the productiveness of the White Grape being inherited, whether from the maternal or paternal parent, though the Cherry was prepotent in determining the color and often the size of the fruit and habit of the plant.

This exhibit was of great value in showing how new varieties are produced, and by the striking influence of parentage on the seedlings produced as illustrated by the above-described varieties.

## RASPBERRIES.

An extensive exhibit of raspberries was not attempted, the fruit being delicate and not well suited to long transportation. The "Black Caps" are first to ripen, and Charles Mills, of Fairmont, sent successfully the Mills' Seedling, Gregg and Kansas. The "Gregg" is one of the largest in size of berries, sweet in flavor and for long distances is one of the best for shipping. The "Black Cap" raspberry is grown extensively for evaporating purposes, in some portions of the State fifty to seventy-five acres being devoted to them on one farm. There is hardly a limit to the extent to which this fruit can be grown, for in the evaporated form it can be shipped to distant foreign markets. The "Red" raspberry, a still more delicate fruit, was also successfully shown by Joseph T. Thompson, of Oneida, who sent a very excellent variety in the "Columbian," which was on exhibition several days in the fresh form and was also shown in solution. This fruit is in large demand, commands high prices, is highly aromatic, and like the "Black Cap," is much sought for canning, in which form its consumption can be extended through the entire year.

## APRICOTS.

While the apricot is a native of the countries of Armenia, Arabia and Central Asia, the wide range of products which the soil of New York is capable of producing was exemplified in the fine exhibit of this very attractive fruit. E. Smith & Sons, of Geneva, showed, on July twentieth, Smith's Early and Harris; on July twenty-ninth Large Early Montgamet, Early Moorpark, Jackson and St. Ambroise, and on August first, Roman and Enreka, while the New York Experiment Station contributed from its grounds, on July twenty-fourth, Ouillin's Early Peach; July twenty-seventh, Catharine; and August third, Nicholas, Golden Russian, Alexander I and Gibb.

## PLUMS.

The soil and climate of New York are admirably adapted to the culture of the plum, though its native home is found in Asia and Southern Europe. While the season had been rather unfavorable for the best development of the fruit, a good display was made of many of the leading and some of the new varieties. The wild plum in two of its species, indigenous to our soil, was also shown — the "Chickasaw" and the "Wild Red;" and although they are not as fine in flavor as a "Washington" or a "McLaughlin," yet they were very attractive in appearance and fair in other points of quality.

The plum is not adapted to all kinds of soil, succeeding best on heavy loam or on clay. This fact makes the territory in which the fruit can be grown somewhat limited, and this for many years has been largely confined to the Hudson river and Mohawk valleys. As high as $600 net profit per acre has been realized for such varieties as the "Reine Claude," "Quackenboss" and "German Prune," the New England States furnishing a very extensive market for this fruit, while New York and Philadelphia have always demanded large supplies. Hudson, Columbia county, is the home of the "Hudson Gage," "Lawrence" and "Columbia." Troy, Albany and Schenectady have produced excellent varieties. Rhinebeck and Fishkill the same, as also Long Island, while the "Washington," one of the best, largest and finest of a long list of varieties, sprang from the soil of a farm then lying near the Bowery in New York city about 1820.

Owing to a development of a fungous disease known as "black knot," the plum orchards of this entire section have been destroyed and plum culture abandoned. New hardy varieties are being introduced from Russia and Japan. New sections are taking up plum culture, while scientific experimenters are endeavoring to discover some fungicide that, when sprayed upon the trees, will destroy the fungous spore of the "black knot," and thus save to the State one of its most valuable fruits.

## PEACHES.

The peach is a native of Persia, and thrives best in a warm climate, but the fruit is grown in large orchards on Long Island, in the Hudson valley and in Central and Western New York. When the soil was newer and possessed more of plant food than at present, the tree was hardy and fruitful, bearing regularly and abundantly.

From August ninth to November first the following varieties were successfully shown, Niagara and Orleans counties contributing largely to the exhibit:

Early Louise; Hynes' Surprise; Globe; Moore's Favorite; Wonderful; Beers' Smock; Late Crawford; R. S. Stevens; Depew; Early Beatrice; Yellow St. John; Longhurst; Mary's Choice; Elberta; Stevens' Rareripe; Foster; Atlanta; Early Rivers; Lulu; Wager; Ellison; Lord Palmerton; Chair's Choice; Early Crawford; Ward's Late; Lamont; Amsden June.

These varieties, with others, covered a period of three months, and they represent a wide range of exceedingly fine quality. The fruit is

in great demand in its fresh form for canning, drying and evaporating, and in the latter form is sent to foreign markets in large quantities. Like the plum, the tree has one serious enemy in a disease known as the "Yellows," which of late years has made serious inroads in the profits of peach culture. The presence of the disease is discovered by the foliage, changing early in the summer from its natural bright green color to that of yellow, the fruit ripening prematurely before fully grown, and the trees showing a general tendency toward decline. The best scientific ability of our country has thus far been baffled to fully understand the nature and cause of the disease, its treatment and prevention. Some of the newer States are wisely enacting legislation to keep this dreaded disease out of their territory by establishing a system of inspection and quarantine of all trees that are imported.

### CANNED FRUITS AND VEGETABLES.

This class was fully represented in a way calculated to show the extent and importance of the canning industry in New York. The season in which strawberries, raspberries and other small fruits, cherries, peaches, plums, and the summer and autumn fruits can be used in fresh form is limited, but when put in cans, preserved, made into jams, jellies and marmalades, they can be had at any time or season, and, with the perfection that is now brought to the method of preserving, their fine flavors are maintained nearly equal to the fresh fruit. Among exhibitors who made very extensive contributions to the State exhibit were Gordon & Dilworth, of New York, and Curtice Brothers & Co., of Rochester, who have extensive factories, employ large numbers of men and women, purchase many carloads of fruits and vegetables, and supply both foreign markets and home consumers.

### EVAPORATED FRUITS.

There was excellent display in this class, which represents a comparatively new but very rapidly-developing industry. A. B. Williams, of Sodus, Wayne county, exhibited evaporated apples, red and black raspberries. In 1892 Wayne county produced 10,000,000 pounds of evaporated apples, 5,000,000 pounds of apple waste, known as skins and cores dried, and 900,000 pounds of evaporated raspberries, of which three-eighths of this entire quantity was produced in the town of Sodus.

Michael Doyle & Co., of Rochester, made an excellent display, comprising the following collection: Two cases Rochester pippins, two cases evaporated apples, one case sun-dried apples, one case chopped apples, one case apple waste, one case dried plums, one case dried cherries, one case evaporated peaches, one case dried whortleberries, one case evaporated red raspberries, one case evaporated black raspberries, and one case dried blackberries.

### VEGETABLE DEPARTMENT.

To attempt an exhibition of green vegetables nearly 1,000 miles away from New York, to cover a period continuously for six months,

CANNED GOODS EXHIBIT

was a difficult and arduous undertaking. But, nevertheless, 248 feet of space was taken on the main floor of the Horticultural Building, which, being occupied by the only exhibit of fresh vegetables in the building for several months of the exposition, gave New York special prominence in this department.

The products of the truck farming of the United States that are produced at distances from markets, requiring transportation by rail or water, are valued at $76,517,155; and the value of these products in what is known as the "New York and Philadelphia District," is $21,102,521. Add to this latter the value of the yield of market gardening, which is carried on near cities where the producer delivers his vegetables by his own teams to the retailer or consumer, and it will be seen that this is one of the leading industries of the State. Glass-house culture of vegetables is carried on extensively, especially near New York and other large cities, the profits from this system ranging from $7,000 to $10,000 per acre.

The first exhibit, made in May, was a general collection of early, choice varieties of asparagus, spinach, lettuce, celery, beets, beans, water cress, tomatoes, cucumbers and cauliflowers from the glass-houses on Long Island and from Cornwall-on-the-Hudson. Plans were carefully made with individual growers to forward supplies from different parts of the State, as the season advanced, but the severest drought known in twenty years, extending over the entire State, tended to cut off these supplies. Arrangements had, however, been made with the New York Agricultural Experiment Station to make a thoroughly scientific exhibit in this department, and this it did to the close of the exposition in the most complete manner. On June twelfth the State station forwarded forty-five varieties of radishes, which represented all shades of colors and sizes and made a very interesting and attractive exhibit. This exhibit of radishes was kept up to the close of the exposition, fresh supplies being forwarded every fifteen days. The number of radishes grown and exhibited by the station amounted to 4,664. Six hundred and twenty-four heads of lettuce were shown, fifteen to nineteen varieties being shown at a time. On June twenty-seventh twelve varieties of peas were forwarded, and these were continued to July twenty-second, when twenty-four varieties were shown. Twenty-five varieties of bush beans were shown and continued from July third to September twenty-sixth. Eight varieties of dwarf limas were also shown continually from August twelfth to September twenty-fifth.

A very excellent plan for showing these different varieties was in boxes twelve by six by three inches, the peas and beans being shown in one division in pods, and in the other division in the shelled form. There were 105 boxes of peas and 137 boxes of beans on exhibition. From August seventh to September twenty-sixth 417 boxes of okra, in two varieties, were shown. No part of the vegetable display attracted more attention than the tomatoes. On August first thirty-five varieties were shown, representing the different colors and sizes, and were especially attractive. On August ninth forty-eight varieties were shown; August eighteenth, fifty-three varieties, and this was continued up to the close of the

exposition, 5,316 specimens of this very popular vegetable having been on exhibition. Sweet corn was shown in twenty-four varieties, popcorn in nine varieties, beets, onions and salsify in all of the best kinds known. On July twenty-sixth the station forwarded twenty-two varieties of cucumbers, and at other times the number reached as high as twenty-six varieties, 1,510 specimens being shown. From July twenty-eighth to October thirtieth there were exhibited eighteen varieties of squashes, with a total of 658 specimens.

Dr. Peter Collier, director of the experiment station, took a very active part in making this an extensive and thoroughly practical exhibit, and few who studied it failed to be impressed with the fact that the soil of New York, if devoted more largely to the culture of choice vegetables, would yield much larger profits than in being used so largely for cereal production. This was the only station in the United States which made an attempt to show the results of its work in garden and field, and these were studied with no less interest by the representatives of other experiment stations than by the vast concourse of visitors who carried from the exhibit many items of valuable information. The following condensed summary shows the contribution made by the New York Agricultural Experiment Station to the combined State exhibit:

| Name. | No. of shipments. | No. of varieties. | Total. |
|---|---|---|---|
| Radishes | 7 | 48 | 4,664 |
| Lettuce | 8 | 19 | 624 |
| Peas | 7 | 24 | 105 |
| Beans | 11 | 25 | 137 |
| Okra | 9 | 2 | 417 |
| Tomatoes | 9 | 56 | 5,316 |
| Corn | 13 | 24 | 844 |
| Beets | 8 | 20 | 814 |
| Carrots | 7 | 16 | 588 |
| Onions | 6 | 22 | 782 |
| Salsify | 3 | 1 | 68 |
| Cucumbers | 12 | 26 | 1,510 |
| Squash | 11 | 18 | 658 |
| Parsnips | 1 | 2 | 22 |
| Cabbage | 1 | 4 | 4 |
| Turnips | 11 | 6 | 40 |
| Egg plant | 1 | 1 | 1 |
| Mushrooms | 2 | 1 | 80 |
| Peppers | 2 | 19 | 684 |
| Muskmelons | 2 | 14 | 115 |
| Watermelons | 2 | 1 | 4 |
| Swiss chard | 2 | 3 | 21 |
| Gourds | 2 | 1 | 225 |
| Celery | 2 | 2 | 20 |
| Cress | 2 | 1 | 2 |

Among other exhibitors of vegetables were H. T. Lane, Victor, Chas. W. Ford, Fishers, and Geo. A. Bonnell, Waterloo, who showed many varieties of potatoes. H. A. Burton, Ripley, Chautauqua county, showed Early Ohio potatoes, and from the same town C. W. Rice showed American Bell; Orra Christy Lee's Favorite; and J. M. Johnson Early Ohio potatoes and White Spine cucumbers; E. D. C. Tracey, Ghent, Columbia county, showing Yellow Danvers and Red Wethers-

field onions; W. H. Card, Onondaga Valley, Mammoth peppers. J. G. Howard, of Rochester, contributed a large and fine general collection of vegetables, in which a particularly fine display of celery was made.

The New York State Agricultural Society forwarded from the State Fair, held at Syracuse in September, a large portion of its exhibit, which occupied every inch of available space. This greatly aided New York in maintaining its fine display of the choicest culinary vegetables, and in retaining for it the distinction of being the only State making a complete and continuous exhibit in this department from the opening to the close of the exposition.

One of the distinguishing features of the New York exhibit was the manner of its installation. Every variety of fruit shown had a label upon it, giving its correct name. In addition to this, varieties of special merit or value had placards placed over them, stating the points of particular value, as to fine flavor, good keeping quality, valuable for home or foreign trade, with description given of the character of the tree or plant producing the same, as a vigorous or slow grower, hardy and productive, etc., which furnished correct and valuable information to the many visitors, who recognized this as one of the most valuable educational features of the exhibit.

This work was very efficiently done by Mr. E. G. Fowler, assistant director, an expert in horticulture, and who, assisted by A. D. Perry, of Syracuse, had the constant charge of this department at Chicago during the exposition.

In every class of exhibits in the department of horticulture, as in others, the Empire State has furnished evidence of its greatness in productions that will furnish food for study and reflection for the generations that are to come.

# CATALOGUE OF NEW YORK EXHIBITS IN DEPARTMENT B, HORTICULTURE.

## COLLECTIVE EXHIBIT.

GROUP 21.— POMOLOGY.

In the fruit catalogue the names of the varieties sent at each shipment are omitted to avoid much useless repetition. An alphabetical list of all the fruit sent by each exhibitor during the exposition is given, however, together with the number and date of each shipment. As a rule each shipment contained all the varieties in season at that date.

### GEO. ANGELL, GHENT.

APPLES.

Shipment made September 12, 1893.

Cranberry Pippin, Gilliflower, Holland Pippin, King of Tompkins County, Northern Spy, Northern Pippin, Swaar, Seek-no-Further, Tallman Sweet, Twenty Ounce.

### FRED. ARGYLE, BLUFF POINT.

GOOSEBERRIES.

Shipment made July 24, 1893.

Unnamed variety.

### T. B. BARNES, RHINEBECK.

APPLES.

Shipment made October 4, 1893.

Ben Davis, Black, Baldwin, Cranberry Pippin, Fall Pippin, Gilliflower, King, Newtown Pippin, Northern Spy, Pound Sweet, Peck's Pleasant, R. I. Greening, Ribston's Pippin, Seek-no-Further, Swaar, Tallman Sweet, Unknown, Virginia Sweet, Vandevere, Wine Sap, Yellow Bellefleur, Yellow Siberian Crab.

### W. D. BARNES, MIDDLE HOPE.

STRAWBERRIES.

Shipments made June 19, 23.

Bubac, Jessie, Sharpless.

APPLES.

Shipment made August 11.

Potter Sweet.

GRAPES.

Shipment made August 11.

Champion, Early Victor, Moore's Early, Peabody.

### A. BASSETT, E. KENDALL

PEACHES.

Shipment made September 12, 1893.

Crawford, Foster.

### NELSON BOGUE, BATAVIA.

PEACHES.

Shipment made October 7, 1893.

R. S. Stevens.

### FRANK BOUCHER, BOSTON CORNERS.

APPLES.

Shipment made October 13, 1893.

Baldwin, Gravenstein, King of Tompkins Co., R. I. Greening, Seek-no-Further, St. Lawrence, Spitzenberg, Wagener, York Pippin.

### F. BOWEN, HIGHLAND.

GRAPES.

Shipment made September 9, 1893.

Niagara.

### GEORGE H. BRADLEY, HESS ROAD STATION.

APPLES.

Shipments made August 25 and September 4, 1893.

Duchess of Oldenburg.

### G. W. BRIGGS, ORCHARD PARK.

APPLES.

Shipment made October 11, 1893.

Baldwin, Ben Davis, Hubbardston's Nonsuch, King of Tompkins Co., Roxbury Russet, Russet Pearmain, R. I. Greening.

### BROCKPORT UNION AGRICULTURAL SOCIETY.

APPLES.

Shipment made October 7, 1893.

Alexander, Baldwin, Cooper's Market, Cranberry Pippin, Cabashea, Fall Jennetting, Fallawater, Fameuse, Fall Pippin, Grimes' Golden, Gilliflower, Golden Sweet, Hubbardston's Nonsuch, Holland Pippin,

HORTICULTURAL BUILDING (CONSTRUCTION PERIOD)

King of Tompkins Co., Lady Sweet, Maiden's Blush, Northern Spy, Newtown Pippin, Pound Sweet, Peck's Pleasant, Porter, R. I. Greening, Ribston Pippin, Roxbury Russet, Siberian Crab, St. Lawrence, Seek-no-Further, Spitzenberg, Tallman Sweet, Twenty Ounce, Twenty Ounce Pippin, Unknown, Westfield Seek, Yellow Bellefleur.

PEARS.

Anjou, Angouleme, Bosc, Clairgeau, Diel, Flemish Beauty, Harris, Howell, Kieffer, Louise Bonne, Lawrence, Onondaga, Seckel, Sheldon, Winter Nelis.

QUINCES.

Rae's Mammoth.

W. B. BROWN, NEWBURGH.

GRAPES.

Shipment made September 4, 1893.
Brown's Seedlings, Nectarines, Seedlings.

T. BURT, GOLDEN BRIDGE.

PEARS.

Shipment made October 11, 1893.
Sheldon.

CHARLES T. BUSH, EAST KENDALL.

PEACHES.

Shipments made August 30, September 12, 26 and October 2, 1893.
Crawford, Crawford's Late, Early Rivers, Foster, Wheatlands.

APPLES.

Lady Blush.

PLUMS.

Reine Claude, Lombard, Kingston's.

CENTRAL NEW YORK HORTICULTURAL SOCIETY, SYRACUSE.

PEARS.

Shipment made September 26, 1893.
Anjou, Angouleme, Boynton Seedling, Barry, Brown Seedling. Brockworth Park, Bosc, Clairgeau, Cluster Seedling, Des Nonnes, Diel, Dix, Duchess Panache, Frederica Bremer, Fyne d'Alencon, Flemish Beauty, Hosenshank, Jacob, Kieffer, Lewis, Lawrence, Louise Bonne, Mount Vernon, Onondaga, Robertson Seedling, Sheldon, Seckel, Samuel's Seedling, Urbanist, Unknown, Vicar of Winkfield, White Doyenne, Winter Russet, Winter Nelis, William Brown Smith Seedling.

APPLES.

Asylum, Belle et Bonne, Ben Davis, Baldwin, Belmont, Benn Royal, Bottle Greening, Boynton Seedling, Blue Pearmain, Coral Crabapple, Cheeseborough Russet, Colvert, Cabashea, Detroit Red, Dutch Mignonne, Duchess of Oldenburg, Esopus Spitzenberg, English Streak, Egg Top, Early Gilliflower, Fameuse, Fall Pippin, Fall Sweet, Fallawater, Green Sweet, Gloria Mundi, Grape Apple, Gilliflower, Golden Sweet, Greasy Pippin, Gate, Golden Russet, Grimes' Golden, Golden Pippin, Hawley, Hubbardston's Nonsuch, Hamilton Pippin, Jersey Red, Jersey Greening, Jefferies, Jonathan, Keimey Seedling, Landers, Lady Washington, Lady Sweet, Little Gem, Mother, Mason, Munson Sweet, Maiden Blush, Minister, Northern Spy, Nottingham Pie, Newtown Pippin, Ox Apple, Pound Sweet, Primate, Porter, Pumpkin Scocet, R. I. Greening, Red Cheek, Rock Apple, St. Lawrence, Sutton's Beauty, Sheep Nose, Sour Bough, Siberian Crab Apple, Swaar, Seek-no-Further, Tallman Sweet, Twenty Ounce, Tompkins County King, Vandevere, Virginia Sweet, Wealthy, White Pearmain, White Bellefleur, Wagener, Yellow Bellefleur, Yellow Crabapple.

CHAUTAUQUA HORTICULTURAL SOCIETY.

APPLES.

Shipment made September 30, 1893.
Baldwin, Fameuse, Golden Russet, Gilliflower, Holland Pippin, King, Northern Spy, Pound Sweet, Pumpkin Sweet, Porter, R. I. Greening, Rambo, Risley Seedling, Wine Sap, Sweet Russet, Siberian Crab, Twenty Ounce, Wagener, White Bellefleur.

A. T. CLARK, RAYMONDVILLE.

APPLES.

Shipment made September 13.
Alexander, Baxter, Blue Pearmain, Ben Davis, Champion, Cranberry Pippin, Detroit Red, Dricks 5, Fall Harvey, Gravenstein, Golden Russet, Golden Pippin, Gilliflower, Green Nonpariel, Hubbard's Pearmain, Hubbardston's Nonsuch, King of Tompkins County, Langtry, Longford Beauty, Northern Greening, Putnam Russet, Pound Sweet, Pine Apple, Red Astrachan, Seedling Bellefleur, Seek-no-Further, St. Lawrence, Swect Bough, Sweet Greening, Snow Apple, Twenty Ounce, Turkey, Wagener, Yellow Bellefleur.

SEYMOUR CLARK.

APPLES.

Shipment made September 22, 1893.
Fallawater.

JOHN CLINE, MASSENA.

APPLES.

Shipment made September 13.

Alexander, Amer's Seedling, Brockville Beauty, Duchess, Detroit Red, Golden Greening, Green Nonpariel, Golden Russett, Irish Peach, Jersey Sweet, King of Tompkins Co., Langtry, Langford Beauty, McIntosh Red, Montreal Beauty Crag, Oxheart, Peck's Pleasant, Pumpkin Sweet, Pine Apple, Pound Sweet, Pewaukee, Sweet Greening, Sweet Bough, Summer Queen, Scott's Winter, Sweet Golden Russet, Snow, Stone, St. Lawrence, Seek-no-Further, Tallman Sweet, Tetofsky, Transcendent Crab, Wealthy, Yellow Transparent.

F. B. CLOTHIER, SILVER CREEK.

APPLES.

Shipments made August 24, 1893.

Baldwin, Bentley's Sweet, Greening, Golden Sweet, Red Astrachan, Sweet Bough, Siberian Crab.

PLUMS.

Clapp, Horse, Yellow Gage.

PEARS.

Bartlett, Clapp's Favorite, Duchess Tyson.

BLACKBERRIES.

Early Wilson.

PEACHES.

Atlantic.

CHAS. COOLIDGE, PHELPS.

APPLES.

Baldwin, Cheeseborough Russet, Northern Spy, Roxbury Russet, R. I. Greening, Tallman.

GEO. DOW.

STRAWBERRIES.

Shipment made June 21, 1893.

Unknown seedlings.

M. DOYLE & CO., ROCHESTER.

Shipment made October 13, 1893.

Evaporated apples, evaporated peaches, evaporated plums, evaporated cherries, evaporated raspberries, evaporated blackberries.

T. J. DWYER, CORNWALL ON HUDSON.

STRAWBERRIES.

Shipment made June 21, 1893.

Bubac, Cumberland Triumph, Gaudy, Lovett's Early, Lennig's White, McPartland, Parker Earle, Sharpless.

ELLWANGER & BARRY, ROCHESTER.

PEARS.

Shipments made May 22, August 12–26, September 12–26, October 4.

Adams, Arbre Courbe, Ansault, Angouleme, America, Alfonse Karr, Anjou, August Mignard, Angelique le Clerc, Angouleme Bronze, Black Worcester, Beurre des Mouehouse, Brandywine, Beurre Mauxion, Beurre de Waterloo, Beurre Hammecher, Bartlett, Boussock, Beurre Amanlis, Bergamot, Buffo, Beurre Antoine, Buffum, Beurre de L'Assomption, Bergamet Heitrich, Bloodgood, Beurre Audusson, Beurre Moire, Bosc, Beurre Dumont, Bezi de la Motte, Beurre Capiumont, Beurre Gris d'Hiver, Bergamot Arsine Sannier, Bergamot Royal d'Hiver, Blanquet St. Onge, Beurre D'Aremburg, Beurre Alex Lucas, Brockworth Park, Beurre Duhaume, Beurre Antoine, Beurre Dubuissor., Canandaigua, Clairgeau, Clapp's Favorite, Clapp's No. 64, Cabot, Conseiller de la Cour, Col. Wilder, Comte de Paris, Columbia, Chapman, Clapp's No. 125, Coit's Beurre, Catinka, Colmar Epine, Church, Doyenne Jamin, Duehesse de Bordeaux, Doyenne Downing, Doyenne Dillen, Doyenne Robin, Dr. Jules Guyot, Duchess Precoce, Dearborn's Seedling, Deliees de Mons, Dr. Nelis, Dix, Democrat, Duhamel du Monceau, Doyenne du Cercle, Doyenne Sieulle, Doyenne d'Alencon, Dr. Benit, Elizabeth Edwards, Emile d'Heyst, Epine Dumas, E. & B. Seedling, Eastern Belle, Elizabeth, Easter Beurre, Fondante de Bihorel, Fox No. 7, Frederick Clapp, Fondante de Cuerne, Fondante de Thiriot, Fondante de Paniseul, Figue d'Alencón, Grey Doyenne, Gregoire Bourdillon, Gansel's Bergamot, General de Lourmel, Grand Mogul, Gansel's Seckel, Hoosic, Hardy, Howell, Steinmetz Catharine, Homewood, Huyshe's Prince Consort, Island, Jersey Gratioli, Jalousie de Fontenay, Jackson, Jones, Josephine de Malines, Kingsessing, Kirtland, Kieffer, Livingston's Virgalieu, Lodge, Little Gem, Loriol de Baruy, Le Comte, Lovaux, La France, Lawrence, Louise Bonne, Langlier, Lamartine, Margaret, Mace, Muskingum, Madame Blanche Sannier, Madame Treyve, Madame Heutin, Manning's Elizabeth, Madame Cuisin, Magnate, Marie Parent, Mount Vernon, Miller, Madame von Siebold, Margaret d'Anjou, Napoleon, Newberry, Oswego Beurre, Paradise d'Automne, Prevost, P. Barry, Pendleton's Early York, President Gilbert, Pound, Prince Imperial, Petre, Pardee's Seedling, Paul Ambre, Platt, Pitmaston Duchess, President Mas, Raymond de Montlaur, Reeder, Richards, Rapalje's

Seedling, Rushmore Bonchretien, Summer Virgalieu, Sterling, Sarah, Superfine, Souvenir du Congres, Summer Franc Real, Sheldon, Soulard Bergamot, Seckel, Selieck, St. Crispin, St. Andre, Souvenir d'Esperen, Tyson, Tyler, Upper Crust, Van Buren, Vicar of Winkfield, Washington, Wharton's Early, Winter Nelis, White Doyenne, Zoar Beauty.

L. J. FARMER, PULASKI.

STRAWBERRIES.

Shipments made June 28 and July 3, 1893.

Accomac, Auburn, Anna Forest, Beauty, Beverly, Burt, Bubac, Beder Wood, Beebe, Crawford, Cumberland, Cloud, California, Cameronian, Dayton, Edwards' Favorite, Edgar Queen, Eureka, Enhance, Eclipse, Farnsworth, Gaudy, Gov. Hoard, Gen. Putman, Gillespie, Great Pacific, Haverland, Hermit, Iowa Beauty, Jucunda Imperial, Jewel, Jessie, Lady Rusk, Long John, Lovett, Leader, Mark, Mystic, Miami, Muskingum, Michel's Early, Morning View, Manchester, Middleford, Mrs. Cleveland, Oregon Everbearing, Oregon, Parker Earle, Pearl, Phillips' No. 1. Sadie, Southard, Shuster's Germ, Standard, Swindle, Stayman's No. 1, Saunders, Sharpless, Van Deman, Woolverton, Waldron, Windsor Chief, Warfield, Wilson, Walton.

SETH FENNER, EAST AURORA, N. Y.

PLUMS.

Shipments made September 2, 1893.

German Prune, Goliath, Horse, Lombard, Orleans, Red Magnum Bonum, Reine Claude, Schenectady, Catharine, unnamed varieties (2).

APPLES.

Baldwin, Fameuse, Maiden's Blush, Roxbury Russet, Twenty Ounce, unnamed varieties (2).

PEARS.

Bartlett, Bosc, Clapp's Favorite, Seckel.

JAMES FLAHIVE, PENN YAN.

APPLES.

Shipment made September 12, 1893.

King, Lady Elgin, Northern Spy, Summer Pippin, Seek-no-Further, Wagener.

PEARS.

Bartlett.

M. FLEMMING, WALLKILL.

APPLES.

Shipment made August 11.

Red Astrachan, Sweet Bough, Sour Bough.

J. B. GRAHAM, SYRACUSE.

CHERRIES.

Shipment made July 17, 1893.

Napoleon Bigarreau.

E. S. GREENE, GOLDEN BRIDGE.

APPLES.

Shipment made October 11, 1893.

Fallawater, R. I. Greening, Tallman Sweet, Northern Spy.

C. W. HAINES, MILLBROOK.

APPLES.

Shipment made October 13, 1893.

Bellefleur, Bailey Sweet, Cranberry Pippin, Colvert, Gilliflower, Greasy Pippin, King of Tompkins Co., Newtown Pippin, Northern Spy, Oblong Crab, R. I. Greening, Roxbury Russet, Stone, Swaar, Seek-no-Further, Tallman Sweet, Twenty Ounce.

S. E. HALL.

STRAWBERRIES.

Shipment made June 21, 1893.

Unknown seedlings.

W. H. HART, POUGHKEEPSIE.

APPLES.

Shipment made September 23, 1893.

Belle et Bonne, Baldwin, Ben Davis, Dutch Mignonne, Esopus Spitzenberg, Fall Pippin, Gano, Golden Russet, Hubbardston's Nonsuch, Hart, Holland Pippin, Jonathan, King of Tompkins Co., Ladies Sweeting, Monstrous Pippin, McLellan, Mother, Northern Spy, Poughkeepsie Russet, Peck's Pleasant, Rock Pippin, R. I. Greening, Ribston's Pippin, Roxbury Russet, Swaar, Smokehouse, Tallman Sweet, Vandevere.

H. E. HEND, NEWBURGH.

PEARS.

Shipment made September 4, 1893.

Bartlett.

PEACHES.

Wager.

G. S. HILLERMAN, READING CENTER.

APPLES.

Shipment made October 7, 1893.

Baldwin, Red Streak, Gilliflower, King of Tompkins Co., R. I. Greening, Roxbury, Seek-no-Further, Tallman Sweet, Twenty Ounce.

L. E. HORTON, GOLDEN BRIDGE.

APPLES.

Shipment made October 11, 1893.

Golden Pippin, Hays, Northern Spy, Twenty Ounce.

PEARS.

Lawrence, Frederick Clapp.

C. B. HUGHSON, BRISTOL.

APPLES.

Shipment made September 12, 1893.
Maiden's Blush.

G. E. HUGHSON, BRISTOL SPRINGS.

APPLES.

Shipment made October 13, 1893.
Lady Sweet.

W. E. HUNT, HUNT'S CORNERS.

APPLES.

Shipment made October 11, 1893.
Gilliflower, Hutchings' Virgie Seedling, King of Tompkins Co., Northern Spy, Rag, Seek-no-Further, Twenty Ounce.

F. W. LA GRANGE.

APPLES.

Shipment made October 11, 1893.
Baldwin, Bellefleur, Ben Davis, Cabashea, Gilliflower, Golden Thread, King of Tompkins Co., Norton's Melon, Northern Spy, Pound Sweet, Peck's Pleasant, Roxbury Russet, R. I. Greening, Spitzenberg, Tallman Sweet.

QUINCES.

Orange.

D. C. LEROY, BALDWINSVILLE.

PLUMS.

Shipment made September 6, 1893.
Bleecker's Gage, Damson, Frost Gage, Italian Prune, Imperial Gage, Orleans.

PEARS.

Bartlett, Duchess, Seckel, Tyson.

APPLES.

Red Astrachan.

QUINCES.

Orange.

HENRY LUTTS, YOUNSGTOWN.

PLUMS.

Shipments made August 4, 9, 17, 26 and September 1, 26.
Abundance, Bradshaw, Duane's Purple, Fillenberg, Glass Seedling, Lincoln, McLaughlin, Ogon, Pond's Seedling, Quackenboss, Reine Claude, unknown varieties (?), Wild Goose, Yellow Egg.

PEACHES.

Amsden's June, Beers' Smock, Chaem Choice, Early Beatrice, Ellison, Elberta, Early Rivers, Early Louise, Globe, Hynes' Surprise, Japanese Wineberry, Lord Palmerston, Lulu, Longhurst, Mary's Choice, Moore's Favorite, Mulberry, Stevens' Rareripe, Wager, Yellow St. John.

LYONS BROS., KATONAH.

PEARS.

Urbanist.

WM. MARCY, E. KENDALL.

PEACHES.

Shipment made September 12, 1893.
Early Crawford.

CHAS. MILLS, FAIRMONT.

BLACK RASPBERRIES.

Shipment made July 15, 1893.
Gregg, Mills' Seedling, Kansas.

GOOSEBERRIES.

Auburn.

CURRANTS.

Mills' Seedling Cluster.

W. D. MILNE, EAST KENDALL,

PLUMS.

Shipments made August 30, September 12 and 28, 1893.
Kingston, Lombard.

PEACHES.

Early Crawford.

APPLES.

Baldwin, King of Tompkins County.

PEARS.

Duchess.

QUINCES.

Orange.

JACOB MOORE, ATTICA.

CURRANTS.

Shipments made July 24, 28 and 29, 1893.
Crossbred Seedlings, Nos. 260, 300, 10, 420, 280, 180, 400, 210, 200, 170, 450, 430, 250, 320, Moore's Dark Red.

GOOSEBERRIES.

Two seedling varieties.

F. C. MORRIS, YOUNGSTOWN.

PEACHES.

Shipment made June 9, 1893.
Amsden's June.

B. MURPHY, E. KENDALL.

PEACHES.

Shipment made September 12, 1893.
Early Crawford.

CANNED FRUIT EXHIBIT

APPLES.

Flower of Genesee, King of Tompkins Co., Twenty Ounce.

## NEW YORK EXPERIMENTAL STATION, GENEVA.

STRAWBERRIES.

Shipments made June 19, 21, July 1.

Allen No. 1, Allen No. 3, Bessie, Beverly, Bubac, Beder Wood, Burt, Chair's Favorite, Crosby No. 10, Eureka, Freight's No. 2, Governor Hoard, Hoffman, Haverland, Hazleton No. 1, Laxton's Noble, Middlefield, Mitchell's Early, Manchester, No. 205 Station, Oregon Everbearing, Oliver, Phillips' Seedling, Princess, Smettzer's Early, Townsend's No. 2, Townsend's No. 9, Van Deman.

CURRANTS.

Shipments made July 7, 15, 24, August 3.

Baldwin, Baldwin's (Black), Champion (White), Champion, Cherry, Columbian Red, Champion (Black), Eclipse, English (Black), Fay, Fay's Prolific, Glorie des Sablons, Lee's Black Prolific, Lee's Black, Loudon Red, Mills' Seedling, North Star, Naples (Black), Naples, Ogden's Black Grape, Prince Albert, Prince of Wales, Red Dutch, Ruby Castle, Saunders' No. 1, Saunders' No. 2, Seedling (White), Versailles, Victoria, White Grape, White Dutch, Wilder.

GOOSEBERRIES.

Shipments made July 1, 19, 24, 27, August 3.

Alderman, Antagonist, Alice, Apology, Bull Dog, Blucher, British Queen, Broom's Girl, Bollin Hall, Briton, Bury Lam, Bowcock, Mrs., Crown Bob, Criterion, Cyprus, Countess of Armsdale, Crystal, Columbus, Candidate, Careless, Crank, Catharine, Dominion, Downing, Duster, Dagwill's No. 1, Dan's Mistake, Diadem, Drill, Duke of Sutherland, Eckender Boy, Excellent, Foxhunter, Flora, Floxtonia, Forvorions, Frontenac, Facination, Fallstaff, Freedom, Golden Prolific, Galopin, Greenock, Green Walnut, Gretna Green, Golden Hers, Garibaldi, George Ridley, Golborne, Gunner, Highlander, Houghton, Hers of the Nile, Huntsman, Hit or Miss, Industry, Improved Early Hedgehog, Italy, Ironmonger, Industry Seedlings, Jolly Angler, King of Trumps, Keepsake, Lawton, London City, Lady Popham, Lady Houghton, Lancashire Lad, Lavinia, Lizzard, Leveller, Lord Leigh, Lord Beaconsfield, Mountain Seedling, Magneta, Major Hibbet, Matchless, Monument, Mitchell, Mt. Pleasant, Nottingham, Nancy, Napoleon le Grand, Nos. 11, 13, 14, 16, 17, 20, 26, and 27, Overall, Pale Red, Peto, Payallup's Mammoth, Postman, Pearl, Plowboy, Pastime, Peru, Pitmaston Green Gage, Queen of White, Queen of Victoria, Queen of Trumps, Rover, Rough Red, Roesch, Red Robin, Red Champagne, Red Warrington, Red Jacket, Roesch's Seedling, Roaring Lion, Smith, Snowdrop, Sportsman, Smiling Beauty, Shiner, Smith's Improved, Sir Geo. Brown, Speedwell, Succeed, Tally Ho, Triumph, Thatcher, Thumper, Trumpeter, Tichbourne, Unity, Village Green, Whitesmith, White Eagle, White Hare, Wistaston, Wellington's Glory, William Watson, White Swan, Wolley, Dr. Whittaker, Mrs. Wonderful, Wakeful.

APRICOTS.

Shipments made July 24, 27, August 3.

Alexander I. Gibb, Catharine, Golden Russian, Nicholas, Oullin's Early Peach.

APPLES.

Shipments made August 3, 12, 28, October 4.

Autumn Streaked, Alexander, August, Aeubaleaf, Blood Red, Ben Davis, Baldwin, Chenango Strawberry, Chicago, Cooper's Market, Duchess of Oldenburg, Dickinson, Early Harvest, Fall Wine, Fallawater, Flora, Fall Pippin, Groskoo Selenka Gruner, Golden Sweet, Grand Sultan, Gravenstein, Gideon No. 1, Golden Russet, Hurlburt, Hyslop Crab, Hartford Rose, Holland Pippin, Haas, Hubbardston Nonsuch, Jefferies, Keswick, Kittagesker, King of Tompkins Co., Late Duchess, Lou, Longfield, Lady Apple, Maiden's Blush, McMahon's White, Mammoth Pippin, Montreal Beauty, Martha Crab, Mother, Oblong, Ontario, Paul's Imperial, Primate, Picta Striata, Pomme Gris, Pewaukee, Paul's Imperial Crab, Princess Louise, Red Beitigheimer, Red Astrachan, Rawle's Janet, Rome Beauty, Roxbury Russet, Red Siberian, R. I. Greening, Rambo, Saps of Wine, Smelling Apple, Stump, Small's Admirable, St. Lawrence, Scott's Winter, Sharp Apple, Sutton's Beauty, Standard, Transcendent Crab, Twenty Ounce, Tallman Sweet, Vandervere, Whitney Seedling Crab, Williams' Favorite, Wagener, Washington Royal.

PEARS.

Shipments made August 28 and October 11.

Boussock, Bartlett, Buffum, Dearborn Seedling, Japan Golden Russet, Maurice Despartes, Russian 439, Sheldon, Van Cott.

PLUMS.

Shipments made August 28 and October 11, 1893.

Botan, Burbank, Golden Beauty, Italian Prince, Mariana, Miner, Ogon, Purple Black, Purple Apricot, Smith's Orleans, Wild Goose, World Beater.

GRAPES.

Shipment made September 4, 1893.

Beagle, Clevener, Croton, Early Ohio, Grayson, Gov. Ireland, Huber's Isabella Seedling, Herald, Juno, Jonesville, Little Blue, Mabel, Marion, No. 8, No. 36, No. 16, White Jewell, Winchell.

## NO NAME, CHARLOTTE.

APPLES.

Shipment made October 2, 1893.

Baldwin, Cooper's Market, Fall Jennetting, Snow, Fameuse, Green Sweeting, Greening, Holland Pippin, Hubbardston's Nonsuch, Johnson, King, Northern Spy, R. I. Greening, Roxbury Russet, Ribston's Pippin, Seek-no-Further, St. Lawrence, Vandevere, Wealthy.

PEARS.

Bartlett, Beurre, Bosc, Clairgeau, Lawrence, Seckel, Winter Nelis.

## ORANGE COUNTY AGRICULTURAL SOCIETY.

APPLES.

Shipment made September 26, 1893.

Ben Davis, Bailey Sweet, Baldwin, Black, Colvert, Cooper's Market, Fallawater, Grimes' Golden, Gilliflower, Gravenstein, Hog Island Sweet, Hubbardston's Nonsuch, King of Tompkins County, Lady Sweet, Lowell, Mammoth Pippin, Maiden's Blush, Northern Spy, Newtown Spitzenberg, R. I. Greening, Rainsdell, Stark, Tallman, Ulster, Vandevere Pippin.

PEARS.

Diel, Louise Bonne, Sheldon, Seckel, Vicar of Winkfield.

QUINCES.

Orange.

## ORLEANS COUNTY AGRICULTURAL AND HORTICULTURAL SOCIETY.

APPLES.

Shipment made September 27 and 28, 1893.

Baldwin, Ben Davis, Cabashea, Fall Pippin, French Spitzenberg, Grimes' Golden, Gilliflower, Golden Russet, Howell Pippin, Holland Pippin, Hubbardston's Nonsuch, Jonathan, King, Lady, Maiden's Blush, Northern Spy, Nonsuch, Peck's Pleasant, Pound Sweet, Roxbury's Graft, R. I. Greening, Ribston's Pippin, Roxbury Russet, Richards' Graft, Seek-no-Further, Swaar, Tallman Sweet, Twenty Ounce.

## W. H. OSBORNE, CLYDE.

APPLES.

Shipment made October 13, 1893.

Baldwin, King of Tompkins Co., Northern Spy, Roxbury Russet, R. I. Greening.

## IRA PEASE, OSWEGO.

PEARS.

Shipment made September 26, 1893.

Bartlett.

## NICHOLAS PHALON, MARLBOROUGH.

GOOSEBERRIES.

Shipment made July 27, 1893.

Seedling.

## C. POWELL, COXSACKIE.

PEARS.

Shipment made September 12, 1893.

Bartlett, Bosc, Beurre, Superfine, Clairgeau, Louise Bonne, Seckel.

APPLES.

Favorite, Hubbardston's Nonsuch, Van Berger, Sour.

## GEO. T. POWELL, GHENT.

APPLES.

Shipments made August 4, 8, 9, 14, 16, 19 and 31, September 7 and 21.

Cranberry Pippin, Early Strawberry, Fall Strawberry, Fall Pippin, Fameuse, Grimes' Golden, Holland Pippin, Jonathan, Keswick, Codlin, Knickerbocker, Porter, R. I. Greening, Red Astrachan, Siberian Crab, Sweet Bough, Twenty Ounce, Unknown, Wagener.

APRICOTS.

Shipments made August 4, 8, 9, 19 and September 7 and 21.

Moorpark.

PEARS.

Anjou, Bloodgood, Buffum, Bosc, Collection, Diel, Doyenne d'Eter, Early Harvest, Louise Bonne, Rostizer, Tyson, Unknown, Unnamed.

## J. D. POWELL, GOLDEN BRIDGE.

APPLES.

Shipment made October 2, 1893.

Gravenstein, King of Tompkins Co.

PEARS.

Anjou, Clairgeau, Seekel.

OLIVER PULVER, GHENT.

APPLES.

Shipment made September 12, 1893.
Baldwin, E. Codling, Fall Greening, Newtown Pippin, Northern Spy, R. I. Greening, Spitzenberg, Seek-no-Further, Twenty Ounce.

ROWLAND ROBINSON, SODUS.

APPLES.

Fall Pippin, Long Island or White Craft, Maiden's Blush, Porter.

W. P. ROGERS, WILLIAMSON.

APPLES.

Shipment made September 27, 1893.
Baldwin, King of Tompkins County, Maiden's Blush, Roxbury Russet, R. I. Greening, Talluan's Sweet.

EVAPORATED RASPBERRIES.

Early Ohio (black), Shaffer (red).

GEO. F. ROWE, SYRACUSE.

CURRANTS.

Shipment made July 4, 1893.
Cherry, White Dutch.

GOOSEBERRIES.

Wellington's Glory.

G. E. RYKEMAN, BROCTON.

QUINCES.

Shipment made October 4, 1893.
Rae's Mammoth.

SENECA LAKE GRAPE GROWERS' ASSOCIATION.

QUINCES.

Shipment made October 7, 1893.
Orange.

E. SMITH & SONS, GENEVA.

APRICOTS.

Shipments made July 20 and 29, August 1.
Early Moorpark, Eureka, Jackson, Large Early Montgamet, St. Ambroise, Roman.

PEACHES.

Ackley, Brigden, Crawford.

O. H. SMITH, ELLICOTTVILLE.

APPLES.

Shipment made October 11, 1893.
Baldwin Bellefleur, Cabashea, Fallawater, Gilliflower, Golden Russet, Hubbardston's Nonsuch, King of Tompkins Co., Maiden's Blush, Newtown Pippin, Northern Spy, Pound Sweet, R. I. Greening, Russet Pearmain, Twenty Ounce, Wagener.

GEORGE C. SNOW, PENN YAN.

APPLES.

Shipments made August 4, 23 and 30, September 22, 1893.
Fall Pippin, King of Tompkins Co., Primate, Red Astrachan.

PEACHES.

Alexander, Yellow Alberger.

PEARS.

Clapp's Favorite.

FRED H. SNYDER, GHENT.

APPLES.

Shipment made September 12, 1893.
Bellefleur, Cranberry Pippin, E. Codling, Fall Greening, Grimes' Golden, Holland Pippin, Hawley, Jonathan, Porter, Pound Sweet, Spitzenberg, Twenty Ounce, Vandevere.

PEARS.

Buffum, Bartlett, Sheldon.

J. F. STREET.

STRAWBERRIES.

Shipment made June 21, 1893.
Unknown seedlings.

J. STUPPLEBEEN, GHENT.

APPLES.

Ben Davis, Black Seek-no-Further, Baldwin, Fall Strawberry, Gilliflower, Jonathan, King, Lady Sweet, Newtown Pippin, Northern Spy, Russet Pearmain, Sheepnose, Wagener.

FRED TABOR, HIGHLAND.

APPLES.

Shipment made August 31, 1893.
Maiden's Blush.

W. F. TABOR, POUGHKEEPSIE.

STRAWBERRIES.

Shipments made June 21 and 29, 1893.
Gaudy, Sharpless.

JOSEPH T. THOMPSON, ONEIDA.

RASPBERRIES.

Shipments made July 27 and August 9, 1893.
Columbian.

GEO. TODD, GOLDEN BRIDGE.

PEACHES.

Shipment made October 2 and 11, 1893.
Crawford's Late, Lord Palmerston, Smock, Stevens' Rareripe, Ward's Late.

APPLES.

Baldwin, Fall Pippin, R. I. Greening, St. Michaels.

PEARS.

Howell.

MORRIS TOMPKINS, GERMANTOWN.

STRAWBERRIES.

Shipments made June 16, 19, 20.
Bubac, Downing, Jessie, Pearl, Sharpless, Snyder Seedling, Unknown, West Shore.

E. D. C. TRACY, GHENT.

APPLES.

Shipment made September 12, 1893.
Bellefleur, Blush Pippin, Cranberry Pippin, Dutch Mignonne, Fameuse, Gilliflower, Gloria Mundi, Holland Pippin, Hawley, Jonathan, Northern Spy, R. I. Greening, Spitzenberg.

E. VAN ALSTYNE, KINDERHOOK.

APPLES.

Shipment made August 11, 1893.
Fall Pippin, Fall Spitzenberg, Gravenstein, Golden Sweet, Maiden's Blush, Wine.

PEARS.

Bartlett, White Doyenne.

GEO. VANDEVERE, AMSTERDAM.

PEARS.

Shipment made October 11, 1893.
Anjou, Buffum, Clairgeau, Hardy, Howell, Lawrence, Oswego Beurre, Sheldon, Vicar of Winkfield, Winter Nelis, Washington.

APPLES.

Baldwin, Esopus Spitzenberg, English Russet, Fameuse, Gilliflower, Golden Russet, King of Tompkins Co., Northern Spy, Roxbury Russet, R. I. Greening, Rambo, Seek-no-Further, Swaar, Tallman Sweet, Wealthy, Yellow Bellefleur.

VAN DRESSER BROS., COBLESKILL.

APPLES.

Shipment made October 13, 1893.
Baldwin, Ben Davis, Fallawater, Fall Orange, King of Tompkins Co., Northern Spy, R. I. Greening, Twenty Ounce.

A. VAN WAGENEN, JR., LAWYERSVILLE.

PEARS.

Shipments made September 4, 1893.
Clapp's Favorite.

PLUMS.

Early Orleans.

APPLES.

Unnamed.

VANDYKE WALTEMIRE, GHENT.

APPLES.

Shipment made September 12, 1893.
Baldwin, Greening, Gilliflower, Spitzenberg, Winter Pearmain.

O. WEED, CLYDE.

APPLES.

Shipment made October 13, 1893.
Ben Davis, Baldwin, Gilliflower, King of Tompkins Co., Northern Spy, R. I. Greening.

WESTERN NEW YORK HORTICULTURAL SOCIETY, ROCHESTER.

APPLES.

Alexander, Baldwin, Ben Davis, Belle et Bonne, Bottle Greening, Black Vandevere, Bailey's Sweet, Boiken, Cooper's Market, Cabashea, Cheeseborough Russet, Coral Apple, Dutch Mignonne, Duchess, Fall Newell, Fall Pippin, Fall Greening, Fameuse, Fallawater, Fall Strawberry, Gilliflower, Gloria Mundi, Gravenstein, Greasy Pippin, Grape Apple, Holland Pippin, Hysop Crab, Hawley, Hubbardston's Nonsuch, Jonathan, King Apple, King, Kentish Fill Basket, Lady Washington, Long Island, Lady Sweet, Mother, Mann, Maiden's Blush, McIntosh Red, Mammoth Pippin, Middle, Newtown Pippin, Northern Spy, Pewaukee, Pound Sweet, Poughkeepsie Russet, Porter, Pine Apple, Roxbury Russet, Ribston's Sweet, Rock, R. I. Greening, Red Canada, Seek-no-Further, Siberian Crab, Swaar, Spitzenberg, Sutton's Beauty, Twenty Ounce, Virginia Sweet, Virginia Sweet Crab, Wagener, York Pippin, Yellow Crab, Yellow Bellefleur.

PEARS.

Angouleme, Anjou, Boussock, Beurre Gris d'Hiver, Barry, Bosc, Clairgeau, Duchess Panache, Duchess de Bordeaux, Howell, Japanese, Josephine de Malines, Kieffer, Louise Bonne, Lawrence, Onondaga, Oswego, Seckel, Sheldon, Vicar of Winkfield, Winter Nelis.

A. B. WILLIAMS, SODUS.

APPLES.

Shipment made October 13, 1893.
Evaporated apples.

RASPBERRIES.

Evaporated red and black.

J. P. WILSON, EAST KENDALL.

APPLES.

Shipment made October 11, 1893.
Baldwin, Cabashea, Roxbury Russet, R. I. Greening, Spitzenberg, Tallman Sweet, Twenty Ounce.

VITICULTURE, Pruning Exhibits

# VEGETABLE EXHIBIT.

## BONNELL, A., WATERLOO.

### POTATOES.

Bonnell's Acme, Bonnell's Columbian, Badger State, Burpee's Extra Early, Brownell's Winner, Early Vaughan, Early Market, Early Wisconsin, Freeman, Farmer's Alliance and Early Northern, Negro, People's Chautauqua, Pride of Ireland, Rural New Yorker No. 2, Rochester Rose, Seneca Beauty, Signal, Sunlit Star, Seedling No. 3, Storm King, The Dandy, The New Queen, Van Orman's Earliest.

## DAVIDSON, G. HOWARD, MILLBROOK.

### BEETS.

Long Red.

### CARROTS.

Danvers.

### CABBAGE.

Brunswick.

### TURNIP.

White Egg.

## FORD, CHARLES W., FISHERS.

### POTATOES.

American Giant, Beauty of Hebron, Belle, Blush, Burbank's Seedling, Crane's June Eating, Champion of England, Dakota Red, Early Rose, Early Puritan, Early White Prize, Empire State, Everitt, General McClellan, James Vick, Jumbo, King of Roses, Laymon Seedling, Late Beauty of Hebron, Mayflower, Mills' Prize, Minister, Moore's Dakota, New Queen, Ohio Junior, Ohio, O. K. Mammoth Prolific, Polaris, Queen of the Roses, Queen of the Valley, Red Ohio, Reeves' Rose, Summit, Sunrise, Vaughan, White Elephant, White Seedling, Woodhull Seedling.

## HASBROECK, LUTHER, NEW PALTZ.

### ONIONS.

Red Wethersfield.

## HOWARD, G. C., ROCHESTER.

Shipment made October 11, 1893.

Beet (Blood Turnip), Carrots (two varieties), Cabbage (two varieties), Celery (two varieties), Celeriac, Mangolds, Egg Plant, Parsnips, Radishes (seven varieties), Salsify, Turnips (four varieties).

## HOWARD, S. G., ROCHESTER.

Shipment made October 13, 1893.

Black Winter Squash, Cucumbers, Cauliflower, Chicory, Celery, Egg Plant, Flat Turnips, Hubbard Squash, Kohl-Rabi, Long Parsnips, Long Carrots, Large White Radish, Red Winter Radish, Red Cabbage, Sweet Corn, Short Carrots, Tomatoes, Turnip Beets, Watermelons, Winter Gourd Squash, White Cabbage, Yellow Globe Turnips.

## LANE, T., VICTOR.

### POTATOES.

American Wonder, Charles Downing, Early Hebron, Ideal, Monroe County Prize, Monroe County Seedling, Rural New Yorker No. 2, Rural Blush, Stray Beauty, White Star.

## NEW YORK EXPERIMENTAL STATION.

### BEETS.

Shipments made June 15, July 19–29, August 4, 10, 30, October 5, 11.

Burpee's Improved Blood Turnip, Burpee's Early Turnip, Bastion's Extra Early Turnip, Bastion's Half Long Blood Red, Columbia, Dewing's Improved Blood Turnip, Dewing's Turnip, Edmands' Extra Early Blood Turnip, Early Egyptian Turnip, Early Blood Red Turnip, Early Yellow Turnip, Egyptian Blood Turnip, Early Bassano Turnip, Henderson's Pine Apple, Large Ribbed Yellow Brazilian, Large Ribbed Silver, Large Ribbed Brazilian Scarlet, Large Smooth Blood Red, Mitchell Perfected Dark Red, New Eclipse, Swiss Charden Green, Swiss Charden Red.

### BEANS.

Shipment made July 7 and August 30.

Best of All, Burpee's Perfection Wax, China Red-Eye, Dwarf German Black Wax, Dwarf Golden-Eyed Wax, Early Mohawk, Emperor William, Extra Early Refugee, Extra Early Speckled Valentine, Flageolet Wax, Improved Rust-Proof Golden Wax, Improved Golden Wax, Kidney Wax, New Prolific German Black Wax, New Black-Eyed Wax, Round Yellow Six Weeks (Vick), Round Yellow Six Weeks (Burpee), Wardwell's Kidney Wax.

### BUSH BEANS.

Shipments made July 13, 17, 24, August 1, September 28.

Best of All, Blue Podded Butter, Burpee's Perfection Wax, Boston Small Pea, China Red-Eye, Champion Bush, Dwarf German Wax, Dwarf German Black Wax, Dwarf Golden Wax, Dwarf Golden-Eyed Wax, Early Yellow Six Weeks, Early Mo-

hawk, Emperor William, Extra Early Refugee, Extra Red Speckled Valentine, Extra Early Red Speckled Valentine, Flageolet Wax, Goddard, Giant Wax, Horticultural, Improved Rust-Proof Golden Wax, Ivory Podded Wax, Improved Golden Wax, Kidney Wax, New Prolific German Black (Wax), New Black-Eyed Wax, New Prolific German Wax, Round Yellow Six Weeks, Refugee, Wardwell's Kidney Wax, White Marrowfat, Yosemite Mammoth Wax, Yosemite Kidney Wax.

CABBAGE.

Shipment made August 4, October 11.

Early Winnigstadt, Giant Red Erfurt. All head early.

CARROTS.

Shipment made July 29, August 4, 10, 11, 30, October 11.

Chantenay, Coreless Long Red, Danver's Half Long Red, Danver's Half Long Orange, Early Very Short Scarlet, Early French Short Horn (Burpee), Early French Short Horn (Vick), Half Long Scarlet Stump Rooted, Half Long Scarlet, Improved Long Orange, Long White Vosges, Large White Belgian, Large Yellow Belgian, Large Red Altringham, Oxheart, Saint Valley.

CUCUMBERS.

Shipment made August 1, 9, 11, 14, 21, 23, 30, September 7, 28, October 4.

Arlington, Burpee's Giant Pera, Burpee's White Wonder, Chinese Long Green, Carter's Model, Chicago Pickling, Carter's Champion, Early Russian, Early Green Prolific, Extra Long Green Prickly, Extra Long White Spine, Extra Frame, Extra Green Cluster, Fordhook Improved White Spine, Giant of Amstadt, General Grant, Green Cluster, Hill's Forcing White Spine, Japanese Climbing, London Long Green, Livingston's Evergreen, Long Green Southgate, Nickol's Medium Green, New Paris Pickling, New Giant White, Peerless White Spine, Rollison's Telegraph, Siberian, Serpent, Thorburn's New Everbearing, Improved Chicago Pickling, Westerfield's New Improved, West India Gherkin, White Pearl, White Spine.

CELERY.

Shipments made September 12, October 12.

Giant Pascal, White Plume.

CAULIFLOWER.

Shipment made October 5.

Lenormand's Short Stem, Thorburn's Extra Early Dwarf Erfurt, Thorburn's Gilt Edge, Snow Ball.

CORN (SWEET).

Shipment made August 3, 14, 18, 24, September 1, 7.

Amber Cream, Black Mexican, Cory, Crosby's Early Twelve Rowed, Chicago Market, Country Gentleman (Burpee), Country Gentleman (Henderson), Extra Early Adams, Early Minnesota, Early Eight Rowed Sugar, Egyptian, First of All, Hickox Improved, Henderson's Red Cob Evergreen, Livingston's New Silver, Improved Ruby, Moore's Early Concord, Marblehead Early, Mammoth Sugar, Mammoth Late, New Early Champion, Ne Plus Ultra, Old Colony, Perry's Hybrid, Potter's Excelsior, Potter's Excelsior (Vick), Potter's Excelsior (Burpee), Stowell's Evergreen (Burpee), Stowell's Evergreen (Vick), Shakers' Early, Stowell's Evergreen, Stabler's Extra Early, Stabler's Pedigree, Triumph, Vick's Golden Nugget, Zig Zag Evergreen.

CORN (POP).

Shipment made August 3, 24, September 1, 7.

Amber Rice, Golden Tom Thumb, Mapledale, Mapledale Prolific, Queen Golden, Silver Lass.

EGG PLANT.

Shipment made October 11.

New York Improved.

GOURDS.

Shipments made August 14, 23, September 1, 4, 28.

Nest Egg.

LETTUCE.

Shipments made July 1, 3, 10, 22, September 28, October 13,

All Year Round, Burpee's Silver Ball, Black Seeded Tennis Ball, Burpee's Hard Head, Black Seeded Butter, Burpee's Tombannock, Buttercup, Blonde Blockhead, Black Seeded Simpson, California Cream Butter, Danver Market, Deacon, Early Prize Head, Early Curled Silisian, Early Curled Simpson, Gold Nugget, Grand Rapids, Harrison, Henderson's New York, Hubbard's Market, Hauson, Imperial White, Imperial White Cabbage, Marble Head Cabbage, Marble Head Mammoth Cabbage, New Balloon, New Celery, New Iceberg, Onondaga, Prize Head, Paris White Cos, Perpigon, Satisfaction, Thick Head Yellow, Trianon, Vick's Premium Cabbage, White Cabbage, Yellow Seeded Butter.

MUSK MELONS.

Shipment made October 4, 1893.

Acme, Burpee's Netted Gem, Bouquet, Banana Citron, Champion Market, Chicago Nutmeg, Emerald Gem, Living-

ston's Columbia, Long Island Beauty, New Tip Top, New Early Hackensack, Orange Christiana, Westley Hall.

### WATER MELONS.

Fordhook Early.

### ONIONS.

Shipments made July 29, August 10, 18, 30.

Extra Early Red, El Paso, Early Yellow Globe Danvers, Giant White Italian, Giant Red Rocca, Giant Rocca, Giant Yellow Rocca, Market Favorite, Mammoth Pompeii, Michigan Yellow Globe, New Mammoth Silver King, New Queen, New Giant Red Rocca, New Silver Ball, Prize Taker, Red Globe, Red Victoria, Round Yellow Danvers, Silver White Etna, Southport Large Yellow Globe, Wethersfield, White Silver Skin, White Victoria, White Globe, Yellow Globe Danvers, Yellow Dutch.

### POTATOES.

Shipment made June 16, July 1, September 28.

American Giant, American Wonder, Blush, Bonell's Acme, Burbank, Brownell's Winner, Burpee's Superior, Burpee's Extra, Bell, Bronnell's Columbian, Badger State, Crane's June Eating, Crown Jewell, Chautauqua, Charles Downing, Champion of England, Dandy, Dakota Red, Early Beauty of Hebron, Empire State, Early Rose, Early Northern, Early Market, Early White Prize, Everett, Early Puritan, Early Ohio, Famous Alliance, Gen. McClellan, Ideal, Jumbo, James Vick, Kosh Konong, King of the Roses, Layman's Seedling, Mills' Prize, Mayflower, Monroe Seedling, Minister, Monroe County Prize, Moore's Dakota, New Queen, Negro, Ohio Junior, O. K. Mammoth Prolific, Pride of Ireland, People, Prize Taker, Polaris, Pearl of Savoy, Queen Roses, Queen of the Valley, Reaves' Rare, Rochester Rose, Rose's Beauty of Beauties, Rural Blush, Rural New Yorker No. 2, Red Ohio, Sunlit Star, Stray Beauty, Storm King, Seneca Beauty, Summit, Sunrise, Thorburn, Van Orman's Earliest, Vaughan's Early, White Star, White Elephant, White Seedling, Wilson's First Choice, Woodhull Seedling.

### PEPPERS.

Shipments made August 9, September 1, 28.

Black Melbian, Craneberry, Coral Gem Bouquet, Ground Nest Egg, Golden Dawn, Kaleidoscope, Long Yellow, Long Red Cayenne, New County Fair, New Dwarf Early Red Squash, New Celestial, Sweet Mountain, Red Chili (Burpee), Red Chili (Vick), Red Cluster (Burpee), Wrinkled Mixed.

### PEAS.

Shipments made June 29, July 3, 7, 13, 19.

American Wonder, Alaska, Bliss Abundance, Bliss Everbearing, Burpee's Best Extra Early, Burpee's Perfection, Burpee's Quality, Burpee's Quantity, Black Eyed Marrowfat, Burpee's Profusion, Champion of England, Carter's First Crop, Carter's Premium Gem, Carter's Telephone (Vick), Carter's Telephone (Thorburn), Calvenwell's Telegraph, Daniels' Duke of Albany, Dwarf Sugar, Dwarf Gray Sugar, Daniels' Matchless Marrow, Dwarf Blue Imperial, Daniels' Early Kent, Extra Early Premium Gem, First and Best (Vick), First and Best (Daniels), First and Best (Burpee), Gem of the Season, Heroine, Horsford's Market, Improved Daniel O'Rourke, Junior, Juno, Laxton's Earliest of All, Laxton's Alpha, Lye's Favorite, Laxton's Evolution, McLean's Little Gem, McLean's Blue Peter, McLean's Advancer, Ne Plus Ultra, Pride of the Market, Philadelphia Extra Early (Burpee), Philadelphia Extra Early (Vick), Prince of Wales, Royal Dwarf White Marrowfat, Stratagem, Shropshire Hero, Tom Thumb (Burpee), Tom Thumb (Vick), Telephone, The Daniels, Tall Sugar, Vick's Extra Early, Vick's King of Dwarf, Vick's Charmer, White Marrowfat, Yorkshire Hero.

### RADISHES.

Shipments made June 15, July 3, September 4, 12, 28, October 5, 11.

Bartlid's Glass, Burpee's Surprise, Burpee's Earliest, Becket's Charities, Burpee's Earliest (Scarlet Button), Chartier, Chartier or Shepherd, Chinese Rose Winter, Chinese Rose Winter (Burpee), Chinese Rose Winter (Vick), California Mammoth White Winter, Dark Red Ball, Earliest Carmine Olive Shaped, Early Long Scarlet Short Top, Early Round Dark Red, Extra Early Scarlet Turnip, Early Yellow Ball, Early Round Dark Red (Burpee), Early Round Dark Red (Vick), Early Oral Dark Red, French Breakfast, Golden Dresden, Giant White Stuttgart, Golden Yellow Summer Turnip, Giant White Stuttgart Summer, Half Long Deep Scarlet, Long White Vienna, Lady Finger, Long Cardinal, Long Scarlet Short Top, Long White Naples, Large White Globe, Long White Vienna (Burpee), Long Black Spanish, Long White Vienna (Vick), Long White Naples (Burpee), Long White Naples (Vick), Long White Spanish Winter, Long Cardinal Burpee, Philadelphia White "Box," Rose Olive Shaped, Scarlet Turnip White Top (Bur-

pee), Scarlet Globe, Scarlet Turnip White Top, Scarlet Turnip, Scarlet Olive Shaped White Top, Scarlet Olive Shaped, Scarlet Turnip (Vick), Scarlet Olive Shaped (Burpee), Scarlet Olive Shaped (Vick), Scarlet Turnip White Top (Vick), Violet Olive Shaped, Violet Olive Shaped Tip, Violet Olive Shaped White Tip, Vick's Early Scarlet Globe, Violet Turnip White Top, White Turnip, White Strasburg, Wood's Early Frame, White Summer Turnip, White Olive Shaped, White Tipped Scarlet Ball, Wood's Early Frame (Vick), Wood's Early Frame (Burpee), White Chinese, Yellow Turnip, Yellow Turnip (Burpee), Yellow Turnip (Vick).

SALSIFY.

Shipment made August 18.

Mammoth Sandwich Island, Vick's All Season.

SQUASH.

Shipments made August 1, 11, 14, 18, September 4, October 4, 28, 1893.

Boston Marrow, Brazilian Sugar, Butman, Der Wing, Early White Scallop Bush, Early Yellow Bush Scallop, Early Hybrid, Essex Hybrid, Fordhook, Golden Summer Crook Neck, Henderson's Delicata, Hubbard, Improved Cocayelle Bush, Mammoth Yellow Bush, Mammoth Chili, New Mammoth White Scallop Bush, New Eureka, Perfect Gem Winter Crookneck, Pike's Peak, Strickler Summer Squash, Small Cocoanut, Warren.

TURNIPS.

Shipments made October 5 and 11.

Early White Strap Leaf, Golden Bell, Long White or Cow Horn, Red Top Strap Leaf, Yellow Globe, White Egg.

OKRA.

Shipments made August 9, 21, 23, 30, September 7.

Dwarf Demsity, White Velvet.

BUSH LIMA BEANS.

Shipments made August 14, 23.

Burpee's Bush Lima, Henderson's Bush Lima, Jackson's Wonder, Kurmerle "Dwarf Lima," Thorburn's Dwarf Lima.

TOMATOES.

Shipments made August 3, 11, 14, 18, 21 and 23, September 1 and 8, 1893.

Acme, Atlantic Prize, Aristocrat Dwarf, Bond's Early Minnesota, Burpee Climax, Chemin, Conqueror, Dwarf Champion, Early Optimus, Early Michigan, Extra Advance, Early Mayflower, Early Advance (Extra), Essex Early Hybrid, Essex Michigan, Golden Trophy, Golden Queen, Hathaway's Excelsior, Horsford's Prelude, Ignotun, Ignotun (Burpee), Ignotun (E. J. Hull), Livingston's Golden Ball, Livingston's Beauty, Livingston's Perfection, Livingston's New Favorite, Long Keeper, Lemon Blush, Lorillard, Large Yellow, Livingston's Large Rose Blush, Livingston's Large Rose Peach, Livingston's Buckeye State, McCullum's Hybrid, Matchless, Vaughan's Earliest of All, Mikado, Yellow Plum Shaped, New White Apple, Yellow Pear Shaped, Nichols, New Currant, Potato Leaf, Peach, Paragon, Ponderosa, Red Cherry, Red Pear Shaped, Royal Red, Strawberry, Stone, Scoville's Hybrid, Small Round Yellow, Turner's Hybrid, Thorburn's Long Keeper, Tucker's Favorite, The Cardinal, Trophy, Terra Cotta, Volunteer.

NUTS ON EXHIBITION.

May 1, 1893.

Chestnuts, three varieties; Shellbarks, six varieties; Butternuts, one variety; English Walnuts (Madeira), one variety; Black Walnuts, three varieties; Filberts, one variety.

TRACY, E. D. C., GHENT.

ONIONS.

Red, Yellow.

## CANNED FRUITS EXHIBIT.

GORDON & DILWORTH.

PRESERVED FRUITS, TWENTY-TWO VARIETIES.

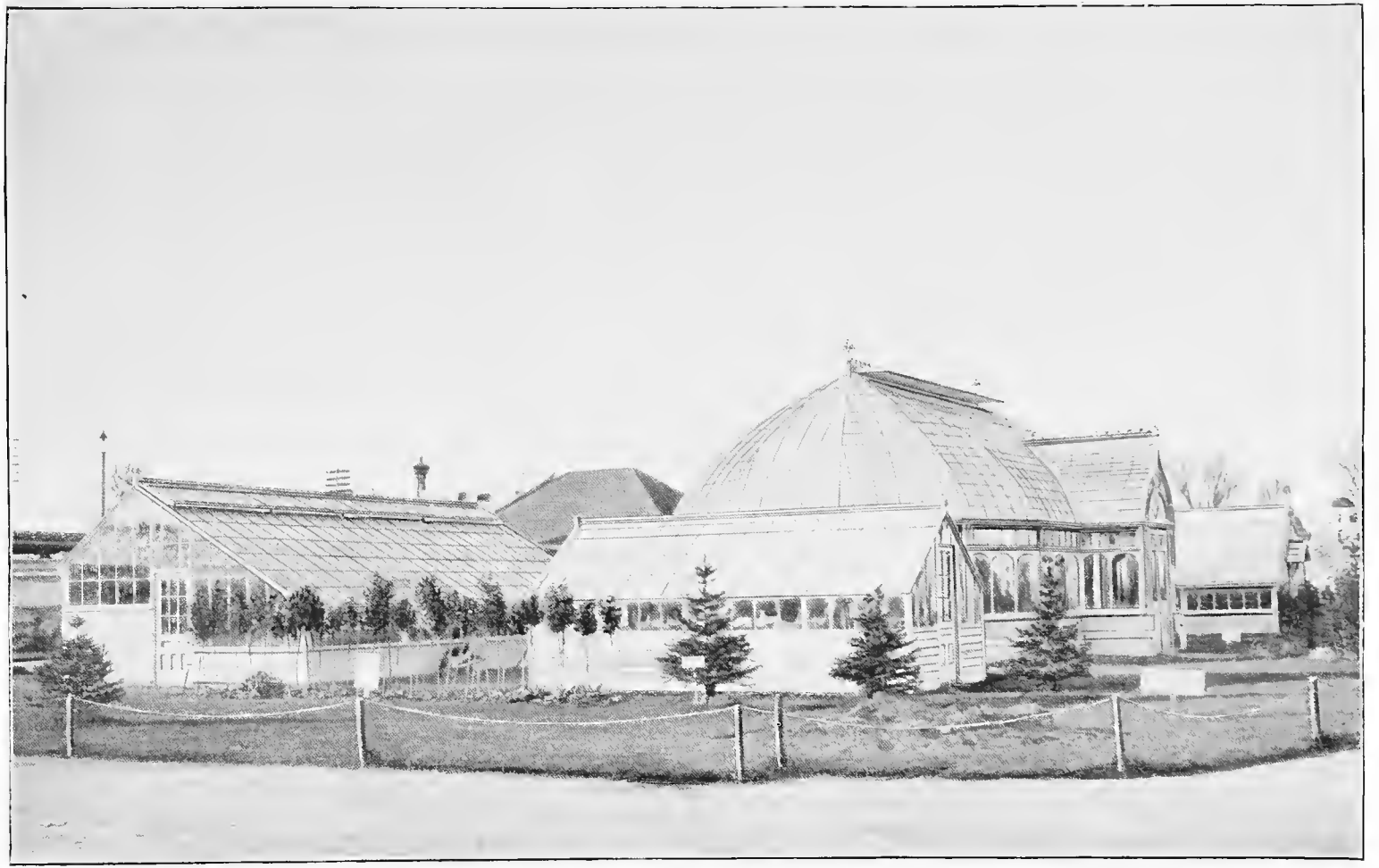
Apricots, Blackberries, Canton Ginger, Crabapples, Cranberry Sauce, Damson's, Green Gages, Gooseberries, Limes, Pineapple Marmalade, Peach Marmalade, Pears, Peaches, Pineapples, Quinces, Raspberries, Red Cherries, Raspberry and Red Currants, Red Currants, Strawberries, Tomatoes, White Cherries.

FRESH FRUITS, TEN VARIETIES.

Apricots, Crabapples, Egg Plums, Green Gages, Peaches, Pineapples, Pears, Quinces, Shredded Pineapple, Shredded Cocoanut.

BRANDY FRUITS, FIVE VARIETIES.

Cherries, Figs, Green Gages, Pears, Peaches.



NEW YORK GREENHOUSES

SWEET PICKLED FRUITS, THREE VARIETIES.

Peaches, Pears, Plums.

CALVESFOOT JELLY, FIVE VARIETIES.

Calvesfoot, Comac, Port, Rum, Sherry.

FRUIT JELLIES, TWELVE VARIETIES.

Apple, Blackberry, Black Currant, Crabapple, Grape, Lemon, Orange, Pineapple, Quince, Raspberry, Red Currant, Strawberry.

JELLY, TWO VARIETIES.

Red Currant, Strawberry.

JAMS, EIGHTEEN VARIETIES.

Apricot, Bitter Orange Marmalade, Blackberry, Black Currant, Crabapple, Cranberry, Damson, Gooseberry, Green Gage, Pear, Peach, Plum, Quince, Raspberry, Red Cherry, Raspberry and Red Currant, Tomato, White Cherry.

OLIVES, SIX VARIETIES.

Berdales, Crestant, Mammoth Queen, Monzanilla, Queen, Singualis.

FRENCH CAPERS.

Catsup, Mincemeat, Pickled Limes, Plum Pudding, Salad Dressing, Tomato Chutmey.

FRUIT SYRUPS, THREE VARIETIES.

Blackberry, Raspberry, Strawberry.

McCREADY, MRS. J. F., BUFFALO.

Cherries (red, preserved), Cherries (white, preserved), Peaches (preserved), Peaches (brandy), Pickles (sweet, chopped), Pickles (Spanish), Pepper Maugols, Martynia.

## NEW YORK STATE EXHIBIT.

PRESERVES, TWENTY-THREE VARIETIES.

Assorted Apples, Apple Butter, Apricots, Blackberries, Cherries, Cherries (white), Cherries (red, preserved), Currants, Cranberry Sauce, Crabapples, Crabapples (preserved), Damsons (preserved), Huckleberries, Peaches (preserved), Peaches (fresh), Peaches (brandy), Pears, Plums, Pineapples, Quinces, Raspberries, Strawberries, Sweet Pickles.

FRUIT JUICES, WITH AND WITHOUT SUGAR.

Blackberry, Cherry, Currant (black), Currant (red), Grape, Lemon, Orange, Pineapple, Raspberry (black), Raspberry (red), Strawberry.

JELLIES.

Apple, Assorted, Crabapple, Currant (black), Currant (red), Grape, Quince, Raspberry (black), Raspberry (red).

JAMS.

Assorted, Blackberry, Currant (black), Currant (red), Currant (red and raspberry, red), Peach, Plums, Quince, Raspberry (black), Raspberry (red), Strawberry.

VEGETABLES.

Asparagus, Beans (baked), Beans (string), Catsup, Corn, Cauliflower, Chili Sauce, Mustard, Peas, Pumpkin (stewed), Pumpkin (steamed), Pumpkin (Erie), Rhubarb, Squash, Succotash, Tomatoes.

POULTRY.

Chicken (boneless), Turkey (boneless), Mincemeat.

SOUPS.

Chicken, Consomme, Green Pea, Julienne, Mulligatawney, Mock Turtle, Macaroni, Ox Tail, Tomato, Vegetable, Vermicelli.

# FLORICULTURE.

By JAMES DEAN, Bay Ridge, Superintendent.

In September, 1892, Mr. James Dean, of Bay Ridge, was appointed superintendent of the State exhibit of floriculture. This, according to the exposition classification, was to be arranged under the following groups:

Group 22 — Floriculture;
Group 24 — Seeds, seed raising, testing and distribution;
Group 25 — Arboriculture;
Group 26 — Appliances, methods, etc.

It was only after much trouble and correspondence that space enough was secured in which to make a display worthy of the State. The next point to determine was from whom suitable exhibits could be obtained. After a short trial it was found that in order to meet with any degree of success, personal application was necessary. The superintendent, therefore, waited on a number of wealthy patrons of floriculture whom he knew to possess collections of special value. Considerable difficulty was experienced in inducing these gentlemen to lend collections which had required many years and considerable expenditure of money to complete. They were under the impression that their valuable plants would be seriously damaged, if not irretrievably spoiled by transportation to and from Jackson Park. This objection was overcome, but the responsibility was felt to be none the less a very grave one. In actual experience one of the greatest difficulties encountered was the moving of the large specimen plants to the fair. Many of the plants, weighing upwards of a ton, had to be handled, to avoid injury, with the greatest care. Often the plants were obtained from localities where sufficient help could not be had in loading them on the cars. In many cases it was found necessary to put a plant upwards of fifty feet high in a forty-foot car. The foliage and leaves had to be bent very carefully to prevent injury. Fortunately in the transportation of the plants to Chicago, not one was injured or a single pot broken.

In October, 1892, the superintendent selected four acres of ground in front of the Government, Electricity, Horticultural and Agricultural buildings, which he had carefully graded, prepared and sown with special lawn mixtures, for level and sloping lawns. As a seed test these lawns were a great success. In the spring time they were beautified by specially designed flower beds, which were kept in masses of bloom all during the fair. March and April were devoted to shipping the exhibits, and toward the end of April there were over seven large carloads of exhibits in place, ready for the opening. To New York belongs the honor of having her floricultural display arranged in a most artistic manner and on a scale which eclipsed that of any other State or country on the opening day of the exposition.

New York occupied almost one-half the space under the great dome of Horticultural Hall. The side facing the north was selected on account of its affording better opportunity for the growing and displaying of the exhibits. This covered an area of 15,000 square feet, which was divided into two sections. One of 7,000 square feet, situated in the northeast section under the dome, was devoted to the special display of cut flowers and florists' supplies, made by the members of the New York Florist Club. The remaining 8,000 square feet was designed in a half circle at the base of the great mound in the center of the dome space. Upon this were arranged the magnificent specimen palms and ornamental foliage plants.

It was declared with much unanimity by the horticultural press that the State collection of palms and foliage plants, and the manner in which they were arranged, were the crowning feature of the floricultural department of the exposition. The idea was to give a practical illustration of plant decorative art. The design was an ideal dell in the tropics. Fifty loads of sand and soil were arranged into miniature hills and dales, rising in the background to a height of forty feet. Twelve loads of natural bark-covered tree trunks, from three to eight feet in height, were arranged in forest-like fashion. Upon these were placed fine specimen palms, the tubs being covered by natural bark to match that on the tree trunks. Fine palms and foliage plants were arranged in naturally disposed groups, while thousands of specimen ferns and beautiful mosses completely covered the ground. An irregular watercourse about seventy-five feet long and from three to sixteen feet wide, was made and cemented. Along each side of this were arranged huge boulders of natural rock stone; these rocks led to the center of the design, where they rose to a height of about twenty feet. Here a fountain of water was made to gush forth, and descend in a natural cascade over the rough rocks, filling up the winding brook below, and forming a very effective and beautiful waterfall and forest-like stream. Huge rocks were placed at various positions on the high hillocks, among which were planted beautiful ferns and selaginellas. A winding gravel walk crossed the stream, close to the waterfall, over a rustic bridge of wood and stone. On either side of this were planted rare ferns and vines that overhung the stream. This winding path, which was here and there banked by ferns and moss-covered rocks, sometimes leading over steps made of rocks, extended the full length of the design.

Viewing the state exhibit from the outside or main walk, visitors were charmed with the very imposing effect of the splendid palms, which were the tallest at the exposition, and ranged from forty to fifty feet in height. There were also majestic fan palms and sugar palms, forming avenues of graceful foliage. Here and there the arching foliage of the Kentias and Arecas, with groups of Dracaenas and ferns beneath, formed lovely vistas through which could be seen the cascade with its splashing waters glittering in a casual ray, piercing the dense mass of foliage. Here and there, too, the eye caught a glimpse of the brilliant foliage of the Crotons, reflecting the combined hues of our spring and autumn woodland scenes. On entering the inner walk, which was continually crowded with visitors, one was struck with the

natural beauty of the scene. All the tropical countries of the world were beautifully represented by grand specimen palms and foliage plants that were grown from seed, and reared at great cost by the wealthy citizens of New York State. Some of these plants had passed through generations of New York families. Here were carniverous plants, first discovered in the jungles of India; bromeliaceous gems, found in tropical America; lovely foliage queens from the crevices and summits of the Andes; and fern trees, depicting in themselves pictures of the forests of far-off Australia. Here was a grand specimen of the Traveler's tree, whose parent grew on the desert lands of Madagascar. Near by was a gigantic banana tree with immense leaves, giving a massive and primeval forest tinge to the whole. O'erhanging vines of the bread-fruit plant met and formed arches. Parasitic moss, peculiar aroids and epiphytal orchids, indigenous to the torrid regions of the tropics, twisted their curious shapes round the trunks of trees or hung in fantastic garlands from overhead. Date palms from Asia and Africa, cycads from Japan, graceful arecas from the Norfolk and Mauritius Islands, caryotas from Ceylon, with many others from different countries were arranged amongst the thousand specimens used in these beautiful groups of rare and valuable plants which formed the principal plant exhibit of New York State.

### HORTICULTURAL ARCHITECTURE.

New York supplied almost all the exhibits of horticultural architecture at the exposition, winning the greatest honors for novel, beautiful and practical designs, complete in every detail of improved methods of construction and finish. These exhibits were in three groups, consisting of nine specially designed greenhouses and conservatories, and were situated on lawns west of Horticultural Hall. These lawns covered an area of 50,500 square feet, wholly occupied by exhibits from New York of greenhouses, lawns, lawn tools and appliances, and beautiful sub-tropical and ornate designs in bedding plants. Six of the greenhouses, fitted with complete heating apparatus, were filled with beautiful and costly collections of plants by New York State, assisted by the New York Florist Club. These plants while on exhibition received the same treatment as is usually given plants in both commercial and private establishments; the most improved implements and garden appliances manufactured in New York State were employed in their cultivation. One of the houses was a model rose house, such as is used by the commercial rose growers of New York. It was filled with four varieties of new roses, some of which were here shown for the first time. From June till November these roses bore thousands of blooms, which all visitors were welcome to inspect. Another house during the months of June and July was filled with a fine display of gloxinias, of which there were many hundred plants, most of them bearing from twenty-five to thirty-five flowers. These flowers were delicate cups of every imaginable hue and color. In August, September and October, these were replaced by a superb collection of tuberous rooted begonias that were greatly admired. During these months they were the only flowers under glass at the fair. They bore

TROPICAL MOUND, Lower Section

many thousands of rich and delicate tinted blooms, in all colors, many of the flowers measuring six inches in diameter.

The central structure was a large palm house or conservatory. Here were exhibited the magnificent collections of Crotons, lent by William Bayard Cutting and the late Jay Gould. The collections consisted of a hundred specimen plants in over fifty varieties, and their beautiful foliage combined every color known in plant life. In the center of this conservatory was a large cemented tank, specially made for our rarest aquatic plants, the principal feature of which was the Victoria Regia, the giant water lily of the Amazon river, the only plant of its kind at the fair. Here was also a fine specimen of Ourciandra Fenestralis, the Lace Plant of Madagascar — a beautiful aquatic product with peculiar foliage, finely divided, resembling lace. Overhanging this tank were the graceful vines of the Bird flowers, Aristolochia, Ornithocephala and Aristolochia Gigas, the latter bearing many enormous flowers, shaped like a pelican. These, in addition to the numerous ferns and graceful vines, hanging from the surrounding benches, gave the house a pretty, tropical appearance.

A portable greenhouse, designed especially for amateurs' use, was filled with a fine collection of Rex Begonias, comprising many beautiful seedlings never before exhibited. A curved roof greenhouse was filled with a choice collection of orchids and ferns, the latter occupying the benches, while the former were suspended from the roof and sides of the house. Still another house, designed for a villa conservatory, was filled with palms and foliage plants, flowering vines lending their charms in its roof decoration. These six houses were considered most valuable educational factors in the furtherance and development of horticultural art. They were open to inspection by visitors, and the many thousands of people who visited them daily served to show how much they were appreciated.

### THE OLD-FASHIONED GARDEN.

A little distance west of the greenhouse exhibit, occupying 2,500 square feet, was a model of an old-fashioned New York garden, which was a unique feature in our exhibit. It was planted early in the spring of 1893, and was a mass of bloom all during the fair. In it was portrayed, as nearly as possible, the beauties and peculiarities of one of those old gardens known on Manhattan Island many years ago. Many of the plants used in this model garden were brought from the oldest gardens in New York. Seldom, if ever, has there been such a collection of "old-time" flowers seen together in so small a space. Lines of old-fashioned daisies marked the graveled walks; in one corner grew patches of thyme and rosemary and lavendar, in another glowed the fragrant blossoms of old cabbage and moss roses. Mignonette and potmarigolds nestled together; hollyhocks and foxglove reared their rival spires of many colored blossoms over the monkshood and snapdragons, as they were wont to do against the old cottage door. Phloxes, larkspur and Jacob's ladder were there too, with dusty millers, Joseph's coat and heartsease. The brilliant glow of the zenias, the old fuschias and geraniums, the petunias, the verbenas, the sweet breath

of heliotropes, reminded many a gray-haired visitor of other days. Columbines and Canterbury Bells, too, were there. Old Fleur-de-lis guarded by bayonet-like foliage laughed at the nodding lilies, the day lily, tiger lily, St. Bruno's lily, plantain lily and lily-of-the-valley. Sweet William, wall flowers, polyanthurs, primroses and auriculas all cherished acquaintances of a floral past. There were sunflowers and poppies and the sea pink. Indian pinks and old clove carnations vied with each other as of old. There were other old favorite garden flowers, some of them unknown to the present generation. This galaxy of every hue and color of delicious sweetness, garlanded as it were by climbing roses and golden honeysuckles, by clematis and nasturtiums, made a picture long to be remembered by the hundreds of thousands who saw and admired it.

### IN FRONT OF HORTICULTURAL HALL — AQUATIC FOUNTAIN.

New York made a fine display in front of Horticultural Hall, occupying 56,000 square feet, or three-fourths of the entire lawn space at that point. Directly in front of the main entrance was situated a large, ornamental, aquatic tank, in which was made the principal aquatic display. Here we exhibited the finest collection of aquatics ever brought together. They consisted of seventy-five distinct varieties, forty of which were nymphæas, indigenous to Europe, Asia, Africa, Australia, Japan, India, Mexico and the United States, but all of which were raised, climatized and improved in New York. There were also splendid new varieties shown and beautiful specimens from New York lakes. In the center grew beautiful groups of nelumbium with their superb flowers of white and deep rose, waving above the dense foliage. These were surrounded by nymphæas, whose lovely fragrant flowers, ranging through every shade of pink, carmine and crimson, the softest blue to deepest purple, sulphur and chrome yellow, bloomed day and night.

A large lawn north and south of this was planted with a fine collection of selected varieties of cannas, consisting of over 5,000 specimen plants, arranged in circular, oval and rectangular beds, each containing 100 plants of a distinct variety. Along the main walks and drives were planted twelve special designs with ornamental bedding plants of every description. These were surmounted by a shield of plants bearing the words "New York." This was the only example of floral decorations exhibited on the exposition grounds. It presented a magnificent scene. The long beds of cannas bearing masses of the most brilliant colored flowers ranged the full length of Horticultural Hall (1,000 feet), forming a striking contrast to the white buildings. The State had upwards of 40,000 plants in front of Horticultural Hall, all of them brought from New York specially for the occasion.

### ON THE WOODED ISLAND.

In the center of Wooded Island New York made the finest display of ornamental trees, shrubs and hardy flowering plants. Eighteen thousand square feet were planted with ornamental trees of every

description and the rarest of decidious flowering and evergreen shrubs. Ten thousand square feet were occupied by collections of herbaceous and annual flowering plants, among which were superb collections of hollyhocks, peonies, phlox and iris, the latter being of special merit. In the international rose garden New York held a prominent position, covering an area of 2,500 square feet. On this were exhibited 1,000 perpetual blooming tea rose bushes in fifty choice varieties which bloomed continually and profusely from early summer to late in the autumn. In addition to this there was a display of many thousands of gladiola. In hardy azaleas and rhododendrons the State made a splendid showing. A large tent covering 3,000 square feet was filled with the rarest collections of these lovely flowers. On the south end of the island the New York Gaelic Society exhibited a large fac simile of the harp of Brian Boru, made of shamrocks imported from Ireland.

### SEEDS, IMPLEMENTS, ETC.

In the north pavilion of Horticultural Hall seeds, garden implements and appliances were exhibited. Here New York's exhibits occupied a large area along the main aisle of the pavilion. Five hundred varieties of flower seeds were shown, with methods of cleaning, testing, preserving and shipping as practiced in the seed trade. Many new inventions in garden implements were also installed here.

In the gallery of Horticultural dome New York exhibitors gave practical illustrations of greenhouse construction, the latest improved methods of greenhouse heating and ventilating, designs for and methods of illustrating horticultural literature, architectural and landscape plans of New York public parks and famous gardens, display of floral photographs illustrating floricultural art of the past fifty years, and immortelle designs, lettering and inscriptions as used by florists. Here, also, the State Museum exhibited a remarkable collection of the edible and poisonous fungi found in the State of New York. On the ground floor east side of the dome the New York Florists' Club made its special display of florists' supplies, plant pots of every description, seed and fern pans, ferneries, jardinieres, cut flower vases, fancy flower baskets, florists' wire designs, seeds, garden hose, plant and flower sprinklers, photographs, and the horticultural newspapers and magazines published in New York State.

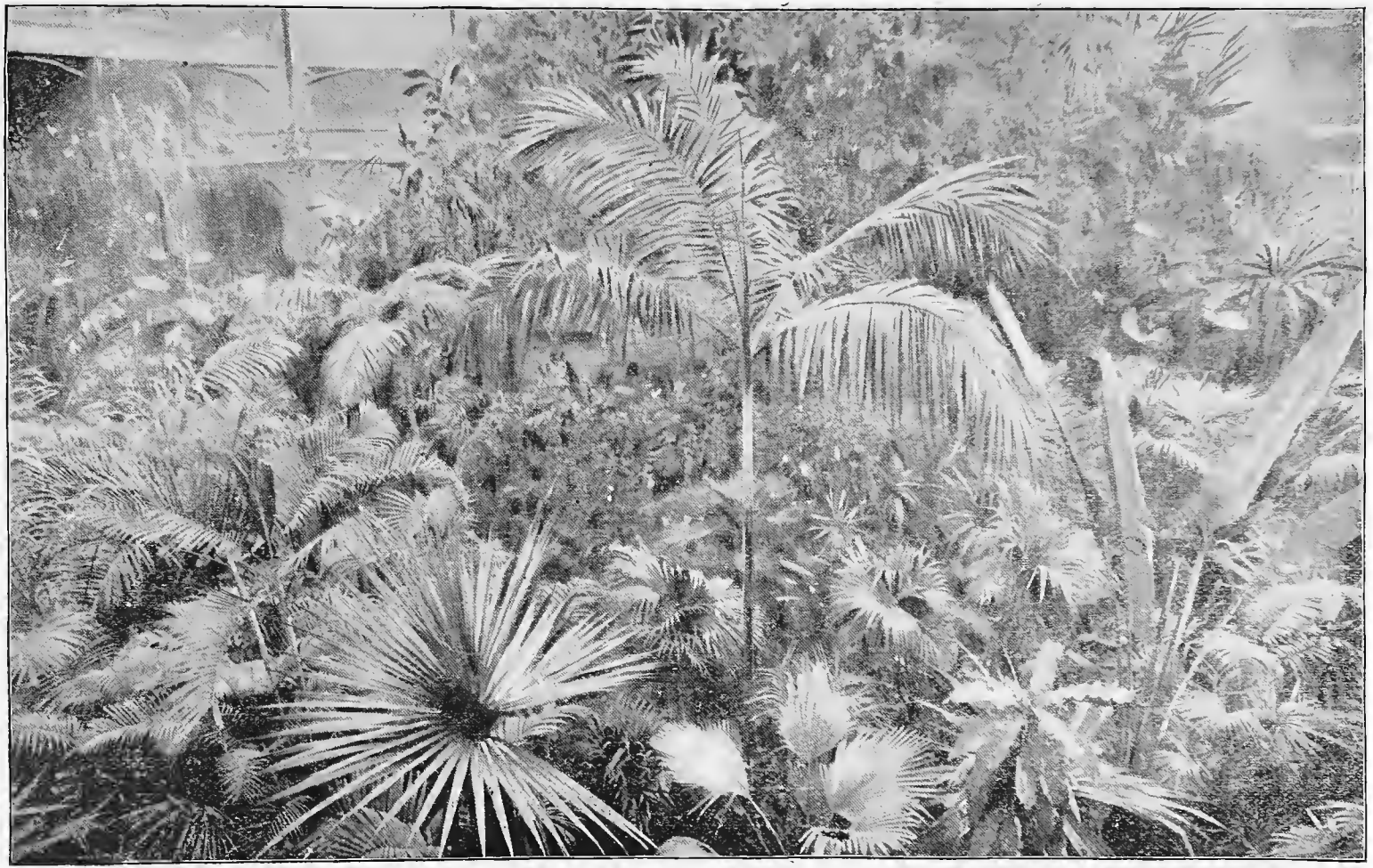
In the dome, facing the palm exhibit of the State, was shown a model of the United States Capitol, twenty-eight feet by twelve feet, made of Cape flowers. Every detail of the great building was faithfully portrayed. It attracted more public attention than any other exhibit in the Horticultural Building.

By a system of cold storage used by commercial growers for the preservation of lily-of-the-valley during the summer months, the superintendent was enabled to make a continuous display of these lovely flowers during July and August. The pips, being sent from ice-houses in New York, were placed in boxes of sand, and forced into bloom here, and were then placed on exhibition in the Horticultural dome. Over 7,500 plants of lily-of-the-valley were bloomed and exhibited in this manner. The New York Florists' Club was the only

organized society in the State that made any attempt to assist in the work. As an organization it urged on its members the necessity of taking an active part in sending exhibits to the fair. As a result they contributed many of the finest exhibits in the department. They also had the honor of rendering it possible to say that New York made the only constant display of cut flowers at the exposition. The magnificent showing of cut flowers made on both New York State and Manhattan days were a great feature on those festive occasions. For the latter day a special car was hired for the purpose of conveying the 200 large boxes, containing many thousands of choice blooms, to the fair, where they were exhibited in Horticultural Hall. In the evening they were taken to the State building, and given as souvenirs to visitors. It has been freely and generally acknowledged that New York State did the most at the exposition to uphold the standard of American floriculture. Scarcely a week passed without its offering some special feature in floral display. In May the State exhibited thousands of lilies, orchids and fine specimen azalea indica. In June it showed countless roses, gloxinias, rhododendrons, hardy azaleas and other flowering shrubs; in July, iris, cannas, hollyhocks, tuberous rooted begonias, and countless varieties of herbaceous and annual flowering plants; in August, aquatic flowers, lily-of-the-valley, roses, cannas, begonias and bedding plants; in September, gladiola, lilies, cannas, rare exotic flowers, and autumnal flowering shrubs; and in October, roses, chrysanthemums, carnations and a general collection of exotic flowers. During many of these months New York's displays were the only ones of their kind at the fair.

The State floricultural exhibits covered an area of six and three-fourths acres. These were divided among four groups, which represented thirty-nine classes. The State made very creditable entries in twenty-six of these classes, winning awards in them all. New York took in all eighty-two medals and diplomas, this being almost as many as were awarded to the rest of the United States in the same classes.

The official grouping and classification, showing the number of awards given in each class, will be found in detail elsewhere.



TROPICAL MOUND, UPPER SECTION

# CATALOGUE OF NEW YORK EXHIBITS IN DEPARTMENT B, HORTICULTURE.

## COLLECTIVE EXHIBIT.

GROUP 22.— FLORICULTURE.

### ABENDROTH BROS., NEW YORK CITY.

Ornamental garden vases and fountains, consisting of twenty-five specially designed specimens.

### ALLEN, C. H., FLORAL PARK, L. I.

Gladiola blooms, consisting of 1,000 selected spikes of blooms in fifty choice varieties, which were placed on exhibition in the New York section of the Horticultural dome during the week of the World's Horticultural Congress, August 18, 1893.

### ASMUS, ERNST.

Convallaria Majalis (Lily of the Valley), comprising seven thousand five hundred (7,500) plants, which were all in bloom and exhibited in the New York section of the Horticultural dome during the months of July and August, 1893.

#### NEW ROSES.

Madame Caroline Testout, new rose, consisting of fifty fine plants.

Kaiserin Augusta Victoria, new rose, consisting of fifty plants, both of which were grown and exhibited in the special rose house, erected by the Lord & Burnham Co.

Cut flowers, sent for Manhattan day.

Cut roses, in the following varieties: 150 Madame Caroline Testout, 200 Madame Hoste, 200 La France, 200 Meteors, 200 Bride's Maid, 200 Perle des Jardins, 100 Madame de Watteville, 200 Madame Cusin.

### ASMUS, RUDOLPH.

Cut flowers: 100 Catherine Mermet roses, 100 Madame Cusin roses, 100 Bride roses.

### BECK, MRS. E., POUGHKEEPSIE.

1 Dracaena Knerkiana, 18 feet high.

### BENNETT, GEORGE, FLATBUSH, L. I.

100 plants of Adiantum Cuneatum in 6-inch pots; 1 Cycas Revoluta, 10 feet high; 1 Goniophlebium Subauriculutum, 4 feet diameter; 25 plants Calceolana Hybrida Grandiflora.

### BERGMANN, G., FLATBUSH.

2 Latania Borbonica, 4 feet high; 1 Kentia Belmoriana; 10 Adiantum decorum; 10 Pteris Argyrea; 10 Pteris Nobilis; 10 Nephrolepis tuberosa; 10 Asplenium biforme; 12 Ampelopsis Veitchii; 12 Hedera Helix; 25 plants of Selaginella Lycopodium denticulata. Cut flowers sent for Manhattan day: 500 chrysanthemum blooms in ten varieties.

### BROWN, WILLIAM, FLATBUSH.

1 Pandanus Veitchii, 5 feet high; 1 Pandanus Veitchii, 4 feet high; 1 Dracaena Youngii, 6 feet high; 1 Nephrolepis Davalloides furcans, 6 feet diameter; 1 Davallia Fijcensis, 4 feet diameter; 1 Adiantum Trapeziforme Cuneatum, 4 feet diameter; 1 Croton Andreanum, 6 feet high; 2 Croton Interruptum, 6 feet high; 1 Compte de Germany, 6 feet high; 2 Maranta Zebrina, 4 feet diameter; 1 Anthurium Grande; 1 Areca Lutescens, 15 feet high.

### BRUNSWICK LITHOGRAPH CO., ROCHESTER.

Lithograph plates of flowers and fruits, as used in horticultural catalogues and magazines.

### BURNS & RAYNOR, MESSRS., NEW YORK CITY.

Cut flowers sent for Manhattan day: 500 rose blooms in ten varieties; 500 chrysanthemum blooms in twelve varieties.

### CHADBORN & COLDWELL MFG. CO., NEWBURGH.

#### LAWN MOWERS.

Display of 53 machines in the following varieties: The New Model Low-wheel Lawn Mower, The New Model High-wheel Lawn Mower, The Rival Low-wheel Lawn Mower, The Rival High-wheel Lawn Mower, The "O. K." Lawn Mower, The Excelsior Roller Lawn Mower, New Excelsior Horse Lawn Mower.

CHILDS, JOHN LEWIS, FLORAL PARK, L. I.

Gladiolus Childsii, consisting of 2,000 bulbs which were planted in the rose garden on the Wooded Island, and were in bloom during August and September, 1893. Iris Kaempferi in improved and choice varieties, consisting of 500 clumps, which were planted in a conspicuous position in the center of the Wooded Island and formed a mass of exquisite colored flowers during the month of July, 1893.

CHRISTENSEN, C. F., BUFFALO.

10 hanging baskets filled with vines and flowering plants; 2 veranda boxes filled with ornamental and flowering plants and vines.

CLARK, DAVID, & SON, NEW YORK CITY.

2 Dracaena Indivisia, 6 feet high; 1 Phœnix rupicola, 5 feet high; 1 Areca Verschaffeltii, 6 feet high; 1 Cyathea Smithii, 5 feet high; 1 Pandanus Veitchii, 5 feet high.

COLDWELL LAWN MOWER CO., NEWBURGH.

LAWN MOWERS.

New York Lawn Mower; Standard Lawn Mower; Imperial Lawn Mower, high and low wheel; Horse Lawn Mower.

CUTTING, WM. BAYARD, OAKDALE.

PALMS AND CROTONS.

2 Phœnix Reclinata, 10 feet high, 15 feet spread; 2 Latania Borbonica, 8 feet high, 14 feet spread; 1 Curculigo recurvata, 6 feet diameter; 1 Philodendron pertusum, 10 feet long; 1 Croton Interruptum, 7 feet high; 1 Croton Andreanum, 8 feet high; 1 Croton Nobilis, 6 feet high; 1 Croton Queen Victoria, 8 feet high; 1 Croton Evansianum, 8 feet high; 1 Croton Illustus, 6 feet high; 1 Croton Mooreanum, 7 feet high; 1 Croton Compte de Germany, 6 feet high; 1 Croton Charlotte Rothschild, 8 feet high; 1 Croton Disraeli, 8 feet high.

DAACHE, H. A., NEW YORK CITY.

PANSIES.

200 plants of each of the following varieties: Imperial Light Blue, Emperor William, Peacock, Azure Blue, Lord Beaconsfield, Marginita Aurea, Silver-edged, White, Violet-edged, Faust, Violet, Yellow, Pelagonium flowered, Auricula flowered, Wall flower colored, Striped, Gold bronze, Rose Lilac, Kaffie Scarlet, Trimardean Black, White Imperial, Mixed Imperial, Black Imperial.

DAILLEDOUZE BROS., FLATBUSH.

Cut flowers sent for Manhattan day: Chrysanthemum blooms (500 specimens), in ten varieties.

DARDS, CHARLES A., NEW YORK CITY.

PALMS AND FOLIAGE PLANTS.

2 Araucaria excelsa, 4 feet high; 10 Araucaria excelsa compacta, 3 feet high; 2 Kenta Belmoriana, 5 feet high; 2 Kenta Forsteriana, 4 feet high; 2 Areca Bauerii, 6 feet high; 1 Latania Borbonica, 3 feet high; 12 Adiantum cuneatum.

DEAN, DAVID, ASTORIA.

Cut flowers sent for Manhattan day: 1,000 carnation blooms in ten varieties.

DEAN, JAMES, BAY RIDGE.

One specimen each of the following varieties of Azalea Indica: Deutsche Perle, Baronne de Vriere, Baron Killich van Horn, Bignoniae flora pleno, Comte de Chambord, Comtesse de Flandre, Concordia, David Milne, Desdemona, Duchess Adelaide de Nassau, Gustave Guilmot, Herman Seidel, Jean Verschaffelt, Louise Pynaert, Le Flambeau, Mad. L. Van Houtte, Memoire de Louis Van Houtte, Oswald de Kerchore, Princess Charlotte, Souvenir de Francois Vervaene, Vesurians, A. Borsig, Apollo, Bernard Andre, Bernard Andre Alba, Ceres, Eugenie de Kerkhove, Emperor of Brazil, Hermonie, Joseph Vervaene, Mad. Marie Planchon, Madame De Grevé, Madame van der Cruyssen, Punctulata, Raphael, Queen of Whites, Sigismund Rucker, Versicolor, Sour de Prince Albert, Empress of India, Alba speciosa plena, Alice, Amoena, Antigone, Apollon, Argus, Baron Nathaniel von Rothschild, Baron Edouard Ory, Beauty Supreme, Candidissima, Chas. Darwin, Ch. Encke, Cocorde Orange, Daphne, Distinction, Dr. Liebig, Duchess de Flanders, Elise Lieber, Flag of Truce, Gloire de Belgigue, Grossfurstin Helene, Harlequin, Hermine, Hermosa, Imperatrice des Indes, John Gould Veitch, John Pope.

FERNS.

500 Adiantum Cuneatum, 100 Adiantum Decorum, 100 Davallia bullata, 50 Nephrolepis tuberosa, 25 Pteris Umbrosa, 25 Asplenium biforme, 25 Adiantum tetraphyllum, 200 Pteris Hastata, 25 Pteris Argyraea, 10 Davallia Platyphilla, 10 Gynogramma Chrysophalla, 10 Aspidium

Effusum, 25 Microlephia hirta cristate, 10 Davallia tenuifolia stricta, 25 Pteris Nobilis, 500 Pteris Serulata cristata densa, 25 Polystichum Angulare prolifera, 10 Onychium Japonicum, 25 Pteris Tremula, 10 Adiantum puberscens, 10 Dicksonia Antarctica, 10 Blechnum fraxineum, 10 Davallia Fijensis, 10 Goniophlebium Subauriculutum, 50 Nephrolepis davalloides furcans, 10 Lygodium Japonicum, 500 Pteris Cretica alba lineata, 50 Polystichum proliferum, 50 Nephrolepis furcans, 500 Pteris Serulata Cristata, 10 Gymnogramme Schizophylla, 10 Nephrodium Molle, 500 Selaginella Denticulata, 100 Selaginella Lageriana, 100 Selaginella Denticulata aurea, 50 Selaginella Serpens, 25 Selaginella Cæsia Arborea, 10 Selaginella Martensus Variegata.

### CROTONS.

1 Veitchii, 1 Elegantissima, 1 Viridis, 1 Lineori, 1 Decorus, 1 Irregularis, 1 Hawkerii, 1 Fordii.

### CANNAS.

1,000 seedling plants from Canna, Madame Crozy.

### ORNAMENTAL FOLIAGE PLANTS, ETC.

1 Pandanus Utilis, 8 feet high, 25 Pandanus Utilis, 25 Pandanus Veitchii, 12 Araucaria Excelsa, 6 Araucaria Excelsa Compacta, 25 Pillea Muscosa, 25 Grevillin Robusta, 15 Ficus Elastica, 1 Anthurium Andreanum, 1 Anthurium Waroqueanum, 1 Dieffenbachia Bausei, 1 Peperomia Maculata, 1 Aralia Sieboldi, 1 Aralia Sieboldi Variegata, 1 Aralia Sieboldi Veitchii.

Lauris Nobilis.

### PALMS.

12 Areca Lutescens, from 4 to 18 feet high; 25 Latania Borbonica, from 2 to 12 feet spread; 6 Rhapis flabelliformis, from 3 to 5 feet high; 25 Kentia Belmoriana, from 3 to 7 feet high; 1 Thrinax Elegans, 6 feet spread; 1 Pritchardia Pacifica, 8 feet spread; 1 Pritchardia Macroearpa, 6 feet spread; 3 Phœnix Canariensis, 5 feet high; 2 Phœnix rupicola, 5 feet high; 4 Phœnix reclineta, 6 feet spread; 2 Phœnix Dactylifera, 5 feet high; 1 Phœnix Sylvestres, 4 feet high; 1 Phœnix Senegalensis, 3 feet high; 2 Phœnix Zelanii, 4 feet high; 1 Sabal Adamsonii, 5 feet high; 1 Chamaerops Excelsa, 4 feet high; 4 Areca Baueri, from 6 to 10 feet high; 1 Corypha Australis, 6 feet spread; 3 Areca Verschaffeltii, 5 feet high; 6 Cocos Weddeliana, 3 feet high; 1 Cycus revoluta, 4 feet high; 1 Brahea filifera, 6 feet spread; 1 Brahea glauca, 4 feet high; 2 Cocos Australis, 8 feet high; 1 Corypha Macrocarpa, 5 feet high; 2 Areca sapida, 6 feet high.

### REX BEGONIAS.

Specimens of the following varieties: Olba, Duke of Veragua, Edward Kennedy, Julia Marlowe, Silver Fleece, Inimitable, Countess Louise Erdody, E. G. Hill, Francois Guillot, Elegans, Isabella Bellou, Sterling, Claudius, Richard Wagner, The Infante, Mrs. Barron, Madame Luizet, Madame Liehocq, Desfontaines, King Charles, Marquis Peralta, Louis Chretien, Wyoming, Greyhound, Madame Treyne, Lady Slade, Robert George, Van Der Miller, Indiana, Anna Dorner, Nickel Plate, Madame Schmidt, Greenback, Walter Lamb, Flora Hill, Sieboldi, Snnderbructini, Whittier, Nancy Hanks, Elsie Coles, Madame Montel, Mrs. Shepard, Ruth Freedley, Ville de Neuilly, Ferdinand de Lesseps, President Carnot, Elegant, Annie Pynaert, Mrs. E. W. Scripps, Roi Fernando Major, Minnie Palmer, Alice White, Bertha McGregor, Diadem, Mrs. E. Bonner, Abbie Mendenhall, Souvenir de Gauham, La Peyrouse, Louise Closson, William Robinson, John Hopper, Little Lucy, Septrum, Quadricolor, Silver Threads, Walter Long, Richmond Beauty, Monge.

### ROSES.

2 Perle des Jardins, Waban, Comtesse de Labarthe, Devoniensis, Etoile de Lyon, Sombrenil, Meteor, La France, Antoine Verdier, Souvenir de la Malmaison, Madame Lambard, Louis Philippe, Hermosa, Madame Philip Kuntez, Souvenir F. Pauleire, Madame Martha du Bourg, Grace Darling, Camelia Raust, A. Sisley, General Tartas, Madame Bosanquet, The Bride, Louis Richard, Mdse. Sisley, Madame Blauchet, Catherine Mermet, Clothilde Soupert, Papa Gountier, Isabella Sprunt, Madame Cusin, Madame Welch, Madame F. Schwartz.

### DRACAENAS.

1 Dracaena Rubra, 2 feet high; 1 Dracaena Lindenii, 3 feet high; 1 Dracaena Amabilis, 2 feet high; 1 Dracaena Cooperii, 2 1-2 feet high; 1 Dracaena Terminalis, 5 feet high; 1 Dracaena Australis lineata, 3 feet high; 1 Dracaena Stricta Grandis, 3 feet high; 1 Dracaena Berkleyii, 2 1-2 feet high; 1 Dracaena Youngii, 4 feet high; 1 Dracaena Fragrans, 6 feet high; 1 Dracaena Lindenii Aurea, 6 feet high; 1 Dracaena Baptisti, 2 feet high; 1 Dracaena Braziliensis, 3 feet high; 1 Dracaena Cantielli, 2 1-2 feet high; 1 Dracaena Draco, 4 feet high; 1 Dracaena Ferrea, 2 1 2 feet high; 1 Dracaena Hendersonii, 3 feet high; 1 Dracaena Imperialis, 1-2 feet high.

DONLAN, EILEEN, BROOKLYN.

Ancient Irish harp design, fac simile of the Brian Boru harp, made of the following named plants: 500 shamrock (Floreat Hibernica), brought from Glasgow Cemetery, Dublin, and Dowth Castle, County L——, Ireland, 500 Echeveria secunda, 1,000 Echeveria secunda glauca, 250 Echeveria agaroides, 300 Echeveria Metalica, 25 Agave Americana, 25 Agave Americana variegata, 50 Sempervivium intus lutens, 1,000 Alternanthera Paryonchoides Major, 500 Alternanthera Versicolor, 2,000 Alternanthera Aurea Nana, 1,000 Alternanthera Amoena.

ELLWANGER & BARRY, MT. HOPE NURSERIES, ROCHESTER.

COLLECTION OF ORNAMENTAL TREES, SHRUBS, ROSES AND HERBACEOUS PLANTS.

50 Sambucus Nigra, 25 Sambucus variegata aurea, 25 Sambucus variegata heterophylla, 12 Sambucus variegata laciniata, 12 Sambucus variegata pulverulenta, 12 Sambucus variegata, 25 Sambucus racemosa variegata plumosa, 12 Berberis Canadensis, 12 Berberis Fortuneii, 12 Berberis illicifolia, 12 Berberis Thunbergii, 25 Philadelphus coronatius, 12 Philadelphus variegata flore pleno, 12 Philadelphus variegata nanus, 12 Philadelphus folia aurens, 12 Philadelphus grandiflorus, 12 Syringa (Lilac) Persica, 12 Syringa Persica alba, 12 Syringa vulgaris, 12 Syringa caerulea superba, 12 Syringa President Grevé, 4 Syringa Siberica alba, 5 Syringa villosa, 4 Syringa Charles X, 2 Syringa Nana, 5 Syringa Ville de Tropes, 3 Syringa gigantea, 5 Syringa rothomagensis, 2 Acer crispum, 2 Acer tripartitum, 2 Acer Morleii, 12 Acer Sanguinea, 12 Acer dissectum atropurpureum, 2 Cerasus Sieboldii alba pleno, 3 Pyrus malus coronaria odorata, 2 Prunus myrobolana flore roseo pleno, 6 Prunus Japonica flore alba pleno, 3 Prunus Japonica flore rubro pleno, 2 Amygdalus communis flore roseo pleno, 2 Amygdalus communis stricta, 6 (Morus) Weepiug Russian Mulberry, 6 Fagus purpurea riversii, 6 Liriodendron panache, 5 Diervilla (Weigela) Monsieur Lemoine, 5 Diervilla rosea, 5 Diervilla Nana folia variegata, 5 Diervilla P. Duchartse, 25 Mahonia Aquifolium, 25 Buxus sempervirens, 15 Rhododendron Catawbiense seedling, 2 Rhododendron Everestianum, 3 Rhododendron Album, 3 Rhododendrou Blandyanum, 2 Rhododendron Atrosanguineum, 3 Azalea Mollis yellow, 3 Azalea Mollis red, 3 Azalea Mollis light red, 3 Azalea Mollis orange, 12 Azalea Ghent, 12 Betula fastlgiata, 12 Betula pendula laciniata, 12 Ulmus stricta purpurea, 6 Ulmus variegata argenta, 6 Tilia alba spectabile, 6 Tilia dasystyla, 6 Populus aurea Van Geertii, 6 Populus fastigiata, 6 Populus Bolleana, 6 Catalpa speciosa, 6 Fraximus alba Argentia Margiuata, 6 Fraximus aucubaefolia, 6 Sorbus quercifolia, 12 Salix Babylonica, 12 Salix Sieboldii, 12 Salix Salamonii, 12 Salix caprearas pendula, 12 Phellodendron Amurense, 25 Deutzia creviata flore pleno, 50 Hydrangea paniculata grandiflora, 25 Spiraea opulifolia aurea, 50 Rose Marshall P. Wilder, 12 Spiraea Van Houtii, 25 Spiraea Rotundifolia alba, 25 Funkia alba grandiflora, 100 Anemone Japonica alba, 100 Anemone Japonica rubra, 100 Hollyhocks mixed, 25 Delphinium formosum, 25 Delphinium bi-color semi-plenum, 25 Delphinium caelestinum, 100 Harpalium rigidum, 25 Hemeroeallis flora, 50 Phlox amoena, 25 Phlox procumbens, 25 Phlox subulata, 50 Phlox Andre Leroy, 50 Phlox Alba, 50 Phlox Queen, 100 Paeonia mixed, 25 Erianthus Ravennae, 25 Eulalia Japonica Zebrina, 25 Eulalia Gracillima Univittata, 25 Eulalia Japonica.

GOULD, JAY, IRVINGTON-ON-THE-HUDSON.

PALMS AND ORNAMENTAL FOLIAGE PLANTS.

1 Seaforthia Elegans, 45 feet high; 2 Areca Luteseens, 15 and 20 feet high; 2 Latania Borbonica, 15 feet high and 25 feet spread; 1 Theophrasta Imperialis, 18 feet high; 1 Ptychosperma Alexandrae, 20 feet high; 1 Primasi Elegans, 8 feet high; 1 Primasi Elegans, 7 feet high; 1 Plectocoma Assamica, 50 feet high; 2 Arenga Bonnetti, 20 and 25 feet spread; 1 Pandanus Utilia, 10 feet high; 1 Pritchardia Pacifica, 8 feet high; 1 Pritchardia Macrocarpa, 7 feet high; 1 Pritchardia Aurea, 7 feet high.

CROTONS.

One specimen of each of the following varieties; Charlotte Rothschild, Disraeli, Interruptum, Nobilis, Pictum, Queen Victoria, Variegatum, Evansianum, Illustus, Prince of Wales, Princess of Wales, Maculatum Katoni Aurea, Mooreana, Majestieum, Undulatum, Veitchii, Williamsii, Compte de Germany, Elegantissima, Fortilis, Magnificum, Splendens, Harmonianum, Bismarkii, Picturatum, Duke of Buccleuch, Mangoldii (new), McArthur, Helen Gould (new), Jay Gould (new).

HEISSINGER, FRANK, NEW YORK CITY.

Architectural landscape designs, embracing plans of New York public and

TROPICAL MOUND, PALM EXHIBIT.

private parks and famous New York gardens.

HENDERSON, PETER, CO., NEW YORK CITY.

Four acres of lawn as an exhibit of Henderson's "Lawn Grass Seed;" Garden implements and appliances; Lawn tools and appliances; Henderson's Lawn Mower (4 blades), all sizes; Henderson's Lawn Mower (6 blades), all sizes; Lawn sprinklers, 8 different kinds; Pruning shears; Pruning and budding knives. Exhibit of seeds in ornamental and novel booth, made fac simile of warehouse, 35 and 37 Cortlandt street, New York city. 500 varieties of flower seeds; seed packages and utensils and appliances of seed trade; tennis sod mixture; lawn grass seed; dried flowers and bulbs.

HORTICULTURAL LITERATURE.

Henderson's Handbook of Plants; Henderson's Gardening for Profit; Henderson's Practical Floriculture; Henderson's Garden and Farm.

CALADIUMS.

Six plants of each of the following varieties: Thelmanii, Chanterii, Refulgens Venosa, Madame Heine, Meyerbeer, Weightii, Max Kalb, Princess Alexandra, Albert Edward, Madame De la Devansaye, Duc de Morny, Bicolor Splendens, Baron de Mamore, Refulgens Rubra.

PANSIES.

The following were grown from seed in the seed testing department at the World's Fair—the plants were afterwards exhibited in their special classes.

Two hundred specimens of each of the following varieties: Trimardeau, white, Violet and yellow, Brown and gold bronze, Gloriosa perfecta quadricolor, Emperor William, Lord Beaconsfield, Little Red Riding Hood, Goldelse, Dr. Faust, Five spotted, Red, Yellow, White, Henderson's mixed, Marble dark, Rose lilac, Light blue, Striped lilac, Marble colored, Purple and yellow, Black yellow eye, Snow white, Havana brown, Bronze, Dark blue, Meteor, White edged, Purple white edged, Black, Red and white, Black and violet, Dark purple, Fine dark mixed, Black shaded blue.

PRIMULAS.

One hundred plants of each of the following varieties: Sinensis fimbriata alba, Sinensis fimbriata rubra, Sinensis fimbriata coccinea, Sinensis fimbriata rubra flore pleno, Sinensis fimbriata Kermesina splendens, Sinensis fimbriata cristata nana alba, Sinensis fimbriata stricta, Sinensis fimbriata filicifolia, Sinensis fimbriata punctata elegantissima, Sinensis fimbriata stricta flore pleno, Sinensis fimbriata alba magnifica, Elatior polyanthus, Japonica, Veris, Macrocalyx, Obconica, Vulgaris, Rosea, Floribrinda, Cortusoides.

CANNAS.

Fifty plants of each of the following varieties: Miss Sarah Hill, Madame Crozy, Admiral Courbet, Duc de Montenard, D. J. Sisley, Nellie Borden.

AQUATIC PLANTS.

1 Nymphæa Sturtevanti, 1 Nymphæa Marliacea Chromatella, 1 Nymphæa Zanzibarensis Azurea, 1 Nymphæa Zanzibarensis Rosea, 1 Nymphæa Odorata rosea, 1 Nymphæa Alba Candidissima, 1 Nymphæa Devontensis, 6 Eichbornia crassipes major, 6 Richardia albo maculata.

Bedding plants.

CINERARIA.

50 plants Cineraria hybrida grandiflora Kermesina, 50 plants Cineraria hybrida grandiflora pyramidalis, 50 plants Cineraria hybrida grandiflora flore plena, 50 plants Cineraria hybrida grandiflora.

MIGNONETTE.

200 plants Mignonette Red Giant, 200 plants Mignonette Machet, 200 plants Mignonette Bird's Mammoth, 200 plants Mignonette Parsons' White, 200 plants Mignonette Golden Queen.

CYCLAMEN.

100 plants Cyclamen persicum, 100 plants Cyclamen giganteum.

CALCEOLARIA.

50 plants Calceolaria Hybrida grandiflora nana, 50 plants Calceolaria Hybrida grandiflora, 50 plants Calceolaria Vesunus.

HOLLYHOCKS.

One hundred plants in selected varieties.

HEWS, A. W., & CO., LONG ISLAND CITY.

Several hundred fancy plant receptacles, jardinieres, plant pots, saucers, rustic hanging fern baskets and ornamental cut flower vases.

HITCHINGS & CO., NEW YORK CITY.

Horticultural architecture, modes of construction, appliances, etc.; conservatory or palm house, 50 feet by 37 feet;

palm house construction, heating, ventilating, benching, flooring, etc.; greenhouse, suitable for general plant house, 19 feet 3 inches by 34 feet; heating, ventilating, benching, flooring, etc.; greenhouse, suitable for general plant house, 19 feet 3 inches by 34 feet; heating, ventilating, benching, flooring, etc.; hot water boilers for hard or soft coal; saddle boilers for wood burnings; saddle boilers for hard or soft coal; conical boilers for hard or soft coal; base-burning water heaters for hard coal; hot water pipes and other appliances for greenhouse heating; ventilating apparatus for greenhouses; glazing of greenhouse with curved or straight glass; iron frames for greenhouse construction; cast iron gutters for greenhouse construction; greenhouse with cast iron gutters; drainage, tile bottom for greenhouse benches; iron frames for greenhouse benches; design for palm house.

HOLT, EDWARD W., NEW YORK CITY.

Garden rubber hose, six varieties in standard sizes; gardener's rubber aprons.

HORAN, ED., NEW YORK CITY.

Cut flowers sent for Manhattan day: 100 blooms of Rose Perle des Jardins; 100 blooms of Rose "Catherine Mermet;" 100 blooms of Rose "The Bride;" 100 blooms of Rose "La France;" 100 blooms of Rose "The Bridesmaid." Collection of 1,000 chrysanthemums in 25 varieties.

JANSEN, EDWARD, NEW YORK CITY.

Fancy wicker basket vases; one specimen antique Venetian ivory enameled wicker plant vase, 8 feet high; one original American blue and silver painted wicker plant vase, 6 feet high; one fancy hat basket plant, 8 feet high; vase on easel; one Egyptian swan neck basket vase, 4 feet high; one fancy shoe plant vase, 8 feet high.

JOOSTEN, C. H., NEW YORK CITY.

Fostite and powder for the prevention of black rot and mildew on plants; patent magazine bellows in two sizes, for the distribution of plant insect powder.

KEITSCH, H., & SON, BUFFALO.

6 Hydrangea otaksa.

KELLER, JOHN M., BAY RIDGE.

12 Pandanus Utilis, 2 and 3 feet high; 12 Pandanus Veitchii, 2 and 3 feet high; 12 Adiantum cuneatum, 12 Nephrolepis Exaltata, 12 Pteris umbrosa, 12 Pteris Argyrea, 25 Pteris Serulata cristata densa, 12 Onychium Japonicum, 12 Lygodium Japonicum, 1 Dracaena Hybrida Stricta, 1 Dracaena Massangeana.

KELSEY, FRED W., NEW YORK CITY.

RHODODENDRONS.

3 Roseum elegans, 3 Gloriosum, 6 Aneen, 4 Madame Cawalbis, 3 Lady Stafford, 4 Choruoides, 3 Princess Hortense, 6 Mrs. John Waterer, 4 Everestianum, 4 Charles Noble, 3 Album elegans, 6 John Walter, 3 Michael Waterer, 3 Perspicium, 4 Nero, 3 Queen, 6 Abaric, 4 Album Multum, 4 Lady Cathart, 3 Minnie, 3 Warrior, 3 Helen Waterer, 2 Polopidas, 2 Candidum, 2 Baron Waterer, 3 R. W. Creme, 3 Blasscum.

JAPAN MAPLES.

7 Acer atropurpureum dissectum, 5 feet high; 6 Acer atropurpureum variegatum, 12 to 18 feet high; 2 Acer atropurpureum; 1 Acer sanguineum; 1 Acer atropurpureum dissectum variegatum, 4 feet high; 2 Acer scolopendifolium rubrum, 5 feet high; 3 Acer rosea Marginata, 4 feet high; 2 Acer versicolor, 4 feet high; 3 Acer pictum albus aureum, 4 feet high; 2 Acer reticulatum, 3 feet high; 1 Acer various varieties grafted together.

ORNAMENTAL SHRUBS.

Biota semper aurea, Biota elegantissima, Biota orientalis, Cupressus lansoniana, Cupressus nutkaensis, Juniperus Chinensis, Juniperus hibernica, Juniperus suecica, Retinispora plumosa, Retinispora argentea, Retinispora plumosa aurea, Standard retinispora plumosa aurea, Standard retinispora gracilis, Standard retiuispora squarosa, Taxus baccata, Taxus erecta, Standard taxus Washingtonii, grafted on taxus hibernica, Thuga aurea, Thuga pyramidalis, Buxus sempericns, Buxus argentea, Buxus aurea Juniperus japonica alba, Biota filifera, Retinispora obtusa nana, Standard variegated Hollies.

KOFFMAN, E., WALDEN.

Smilax, Myrsiphyllum asparagoides (250 specimens); 500 strings of smilax for decorating purposes, sent for Manhattan day.

KRICK, WILLIAM C., BROOKLYN.

Patent florist's immortelle lettering and designs; florist's artistic lettering and designs suitable for all kinds of inscriptions, mottoes and emblems, as used in florists' trade; monogram, in colored immortelles, of the New York Florist Club.

KRETSCHMAR BROS., FLATBUSH.

50 Adiantum cuneatum, 25 Pteris Hastata, 25 Nephrolepis Exaltata, 25 Davallia bullata, 25 Davallia tennifolia stricta.

LEWIS, P. C., MFG. CO., CATSKILL.

Patent spray pumps; "The Wonder" brass machine spray pumps (three sizes), with Lewis' patent graduating nozzles, with automatic mixer for use in spraying plants.

LONG, DANIEL B., BUFFALO.

Floral photographs; one album of 75 photographs of different novel and artistic floral designs; one album of 50 photographs showing the best modern ideas of American floral decorations; one album of 75 photographs showing novel and artistic arrangements in floral baskets and bouquets; large photographs showing the best examples of floral arrangements; 75 placques illustrative of ancient and modern floral arrangements.

LORD & BURNHAM CO., IRVINGTON-ON-THE-HUDSON.

Horticultural architecture for ornamental and commercial uses; conservatory 25 feet by 50 feet; conservatory construction, heating, ventilating, benching and other appliances; model commercial greenhouse 20 feet by 33 1-2 feet; for amateur or commercial purposes, greenhouse construction, heating, ventilating, benching and other appliances; model commercial rose house, 20 feet by 33 1-2 feet; rose house construction, illustrating the latest improved methods for the cultivation of the rose; American rose house construction, heating, ventilating, benching, etc.; portable greenhouse, 15 feet by 25 feet; suitable for palms, orchids, ferns or general plant house; curved greenhouse construction, heating, ventilating, benching, tiling, etc.; portable amateur's greenhouse, 10 feet by 20 feet; suitable for amateur general plant house, with boiler room, and potting bench attached; amateur's greenhouse construction, heating, ventilating, benching, etc.; potting house and office, 15 feet by 20 feet; hot water boiler with the latest improvements in grates, regulators and connections; hot water heating apparatus, for greenhouses, with improved valve and overflow regulators; iron frame work and regulators for plant tables and beds; iron frame construction for straight or curved roof of greenhouses and conservatories; ventilation and ventilating machinery for greenhouses; glazing of greenhouses and mode of setting glass; improved methods of greenhouse flooring, tiling, etc.; workmanship, architectural and practical, connected with greenhouse construction; details of greenhouse construction, filling and interior decorating with plants, practical illustrations in the cultivation of flowers and plants; heating and general registration, illustrative of greenhouse management; photographs showing interior and exterior views of greenhouses erected by the Lord & Burnham Co.; water colored designs of conservatories.

McGOWAN, JOHN.

50 plants canna, Nellie Borden.

McMAHON, FRANK.

Cut flowers sent for Manhattan day: 500 cut roses in five varieties.

MARC, GABRIEL, CO, WOODSIDE.

ROSES — SPECIMEN PLANTS OF STANDARD OR TREE ROSES.

10 La France, 10 General Jacqueminot, 15 Capt. Christy, 10 Paul Neyron, 10 Madame La Charmes, 15 Camille Betnordin, 15 Countess of Oxford, 15 Marechal Cucket, 10 Madame Gabriel Luizet, 10 Charles Margottin, 15 Ulrich Brunner, 15 Magna Charta, 10 Duchess Cambaceras, 15 Alfred Columb, 10 Jean Leisband, 15 Baron Rothschild.

MAY, JOHN C., NEW YORK CITY.

Roses of American origin: 200 plants of new roses, Mrs. W. C. Whitney.

MEISSNER, P. B., FLATBUSH.

PALMS, FERNS, ETC.

6 Kentia Belmoriana, 2 feet high, 4 Latania borbonica, 6 Adiantum cuneatum, 6 Davallia platyphilla, 6 Gynogramma chrysophalla, 6 Aspidium effusum, 6 Davallia tennifolia stricta, 6 Onychium japonicum, 6 Adiantum pubescens, 6 Blechnum fraxineum, 6 Davallia fijensis, 6 Goniophlebium subauriculutum, 6 Lygodium japonicum, 6 Gymnogramme schizophylla, 6 Nephrodium molle, 1 Dracæna Alsace Lorraine.

MILLER, HENRY, EAST NEW YORK.

Cut flowers sent for Manhattan day: 500 cut dahlia blooms; general display of autumn flowers.

NASH, S. C.

Cut flowers sent for Manhattan day: 500 cut roses in five varieties.

NATIONAL WATERPROOF FIBER COMPANY, NEW YORK CITY.

Plant bed cloth for the protection of tender plants.

## NEW YORK FLORIST CLUB.

### COLLECTION OF HERBACEOUS PLANTS AND ANNUALS ARRANGED AS AN OLD-FASHIONED GARDEN.

Allium Neapolitanum, Althæa rosea flore pleno, Anemone japonica, Anemone alba, Anemone Pennsylvanica, Antheri-cum liliago, Aquilega Canadensis, Aquilega chrysantea, Aquilega cœrulea, Aquilega vulgaris, Armeria Alpina, Armeria vulgaris, Aster Alpinus, Aster Amellus, Astilbe japonica, Aubrietia deltoidea, Aubrietia græca, Campanula Carpathica, Campanula alba, Catananche cœrulea, Centaurea Montana, Cerastium tormento-sum, Clematis integrifolia, Convallaria majalis, Coreopsis auriculata, Coreopsis Lanceolata, Delphinium Chinense, Del-phinium formosum, Dianthus barbatus flore pleno.

### HERBACEOUS FLOWERING BULBOUS ORNAMENTAL AND ANNUAL FLOWERING PLANTS.

Dianthus hybridus mulei, Dianthus plumarius, Dielytra spectabilis, Digitalis purpurea, Funkia japonica, Funkia for-tunii, Geranium ibericum, Geum coca-neum, Helianthus agustifolius, Helianthus orgyalis, Hemerocallis flava, Ibers sem-pervirens, Iris kaempferi, Lathyrus latifo-lius, Mimulus cardinalis, Monarda didma, Myosotis alpestis, Myosotis palustris grandiflora, Paeonia tennifolia flora pleno, Papaver bracteatum, Phlox subulata, Platycodon grandiflorum, Primula auri-cula, Rudbeckia hirta, Saponaria offici-nalis flore pleno, Solidago rigida, Spiræa fillipendula flore pleno, Tradescantia rubra, Viola cormuta, Viola lutea, Bellis perenis, Bellis snowflake, Eulalia japonica variegata, Eulalia japonica zebrina, Eulalia gracillima univittata, Thymus vulgaris, Pansies, Polianthes tuberosa, Gladioli, Lilium auratum, Cannas, Roses, Mignonette, Phlox decussata, Stocks, Asters, Loniceras, Petunias, Fuchias, Ver-benas, Carnations, Marigolds, Dahlias, Nasturtiums, Zinnias.

Horticultural literature, including bound volumes and current issues of the following: The Florist Exchange, The American Florist, Garden & Forest, Rural New Yorker, American Garden, National Nurseryman, May Flower, Gardening.

## NEW YORK STATE (COLLECTIVE EXHIBIT).

### PALMS, ETC.

6 Latania Borbonica, 3 to 8 feet high; 6 Kentia Belmorinana, 3 to 6 feet high; 2 Chamaerops excelsa, 4 feet high; 6 Areca lutescens, 4 to 6 feet high; 12 Pan-danus veitchii, 2 feet high; 12 Pandanus Utilis, 3 feet high; 2 Araucaria excelsa, 3 feet high; 6 Maranta massangeana, 2 feet Maranta pulchella, 25 Begonia manicata aurea, 25 Begonia smageridina, 25 Begonia metallica, 25 Begonia rubra, 6 Alocasia cucullata, 200 Panicum variegatum, 25 Ohpropogon jaburan variegatus, 25 Cocoloba platycalda, 100 Pillea muscosa, 12 Aspidestra lurida, 25 Grevillia robusta, 12 Aspidestia lurida variegata, 250 Cobea scandens, 50 Ampelopsis veitchii, 50 Amelopsis quinquefolia, 500 Tradescantia virides vitlata, 200 Tradescantia zebrina multicolor, 200 Tradescantia vulgaris, 200 Tradescantia discolor, 100 Abutilon mega-potamiaun variegata, 100 Senecio mika-noides; 100 Vinca major variegata, 25 Lonicera brachypoda aureo reticulata, 100 Ficus stipulata minima, 250 Hedera helix Hibernica, 100 Maurandya barclay-ana, 50 Ficus stipulata, 100 Mimosa pros-trata.

### BRACAENAS.

One plant of each of the following varieties: Rubra, Lindenii, Amabilis, Cooperii, Terminalis, Austratis lineata, Stricta grandis, Berkleyii, Youngii, Fragrans, Lindenii Aurea, Baptisti.

### FERNS.

3424 plants of the following varieties: 100 Adiantum cuneatum, 50 Adiantum decorum, 25 Davallia bullata, 25 Nephro-lepis tuberosa, 100 Pteris umbrosa, 25 Asplenium biforme, 12 Adiantum macrophyllum, 50 Pteris argyrea, 50 Davallia platyphila, 100 Gynogramma chrysophylla, 100 Aspidium effusum, 25 Microlepia hirta cristata, 100 Davallia tennifolia stricta, 100 Pteris nobilis, 500 Pteris serulata cristata densa, 50 Poly-stichum angulare prolifera, 25 Ouychium japonicum, 100 Pteris tremula, 12 Adian-tum pubescens, 500 Pteris hastata, 6 Dick-sonia Antarctica, 12 Blechnum fraxineum, 2 Davallia fijensis, 1 Goniophlebium sub-auriculutum, 12 Nephrolepis davalloides furcans, 50 Lygodium japonicum, 200 Pteris cretica albo lineata, 12 Polystichum proliferum, 10 Nephrolepis furcans, 100 Pteris serulata Cistata, 10 Gymnogramme schizophylla, 10 Nephrodium molle, 500 Selaginella denticulata, 100 Selaginella lageriana, 200 Selaginella denticulata aurea, 100 Selaginella serpeus, 25 Sela-ginella Caesia arborea, 25 Selaginella Martenses variegata.

### BAY TREES.

4 Lauris nobilis, 20 feet high, oldest and finest specimens in existence; 8 Lauris nobilis, 6 to 10 feet high.

### REX BEGONIAS.

One plant of each of the following varieties: Flora Hill, Siebold, Sunder-

DOME OF HORTICULTURAL BUILDING

bructini, Whittier, Nancy Hanks, Elsie Coles, Madame Montel, Mrs. Shepard, Ruth Freedley, Ville de Neuilly, Ferdinand de Lesseps, President Carnot. Elegant, Amie Pynaert, Mrs. E. W. Scripps, Roi Ferdinando Major, Minnie Palmer, Alice White, Bertha McGregor, Diadem, Mrs E. Bonuer, Abbie Mendenball, Souvenir de Gaulam, La Peyrouse, Louise Closson, William Robinson, John Hopper, Little Lucy, Seeptrum, Quadricolor, Silver Threads, Walter Long, Richmond Beauty, Monge.

ROSES.

1015 plants of the following varieties: 50 Perle des Jardins, 50 Waban, 50 Comtesse de la Barthe, 50 Devoniensis, 50 Etoile de Lyon, 50 Sombreuil, 50 Meteor, 50 La France, 50 Antoine Verdier, 50 Souvenir de la Malmaison, 50 Madame Lombard, 50 Louis Philippe, 50 Hermosa, 10 Madame Ph. Kuntez, 10 Souvenir F. Pauleire, 10 Madame Marthe du Bourg, 10 Grace Darling, 10 Camelia Raust, 10 A. Sisley, 10 General Tartas, 10 Madame Bosanquet, 10 The Bride, 10 Louis Richard, 10 Madame Sisley, 10 Madame Caroline Kuster. 10 Madame Blanchet, 10 Catherine Mermet, 10 Clothilde Soupert, 20 Papa Gountier, 10 Isabella Sprunt, 25 Madame Cusin, 25 Madame Welch, 25 Madame F. Schwartez, 25 Duchess of Edinburgh, 10 Jeanne Guillamerz, 10 Marquis de Vivien, 10 Marie Von Houtte, 10 Souvenir de Dr. Passot, 10 Marie Guillot, 10 Madame Rivers, 15 Gerard Desbois, 10 Madame de Watteville.

CLASS 156.— CLIMBING PLANTS.

Philodendron pertusem, Cobea Scandens, Ampelopsis quinquefolia, Ampelopsis Veitchii, Bignonia grandiflora, Tradescantia Virides Vittata, Tradescantia Zebrina Multicolor, Tradescantia Vulgaris, Tradescantia discolor, Myrsiphyllum Asparagoides, Abutilou Megapotamicum Variegata, Senecio Mikanoides, Vinca Major Variegata, Vinca caerulea Minor, Vinca elegantissima alba, Lonicera brachypoda aureo reticulata, Maurandya Barclayana, Clerodendron Balfouri, Ficus Stipulata, Ficus Stipulata Mininia, Hedera helix Hibernica, Akebia Quinata, Aristolochia Sipho, Miniosa prostrata, Ipomoea ficifolia, Ipomoea Lindleyana, Ipomoea Mexicana vera, Lygodium scandens, Mesembryanthum cordifolium variegata, Tropaeolum Lobbianum, Anthericum Californicum variegatiem, Asparagus plumosus, Asparagus tenuissimus, Begonia glancophylla scandens.

CLASS 162.— CACTEÆ.

Euphorbia Splendens, Agave Americana, Agave Americana variegata, Echeveria agavoides, Echeveria secunda, Echeveria secunda glanca, Agave stricta, Sanseviera Zealanica, Sempervivum intus lutens, Yucca aloifolia, Yucca aloifolia variegata, Yucca filamentosa, Cereus Flagelliformis, Cereus Grandiflorus, Cereus Jamacaru, Philocereus senilis, Opuntia Mickodasys, Echinocerens Multiplex, Echinocactus cylindraceus, Mesembry anthenum cordifolia flia variegata, Kleina Repens, Kleina suspensa.

GLOXINIAS.

200 plants Gloxinia Speciosa Hybrids.

TUBEROUS BEGONIAS.

Superb strain of tuberous Begonias, consisting of 500 plants of choice varieties.

## NEW YORK STATE MUSEUM.

EDIBLE AND POISONOUS FUNGI OF THE STATE OF NEW YORK.

For report and catalogue, see pages 305–308.

## NILSSON, WILLIAM, WOODLAWN.

BEDDING PLANTS.

13 novel floral beds specially designed for the occasion, bedding plants in novel designs, 500 Echeveria secunda, 10,000 Echeveria secunda glauca, 250 Echeveria agavoides, 500 Echeveria metalica, 100 Agave Americana, 150 Agave Americana variegata, 250 Sempervivum intus lutens, 15,000 Alternanthera paryonchoides major, 5,000 Alternanthera versicolor, 10,000 Alternanthera aurea nana, 5,000 Alternanthera amoena.

## OASIS NURSERY COMPANY, WESTBURY STATION, L. I.

Tuberous rooted Begonias, consisting of 250 plants of Griffin's superb strain in choice colors.

CUT FLOWERS.

5,000 tuberous rooted Begonia blooms, in variety.

## PARSONS & SONS CO., FLUSHING.

ORNAMENTAL TREES.

One specimen of each of the following varieties: Magnolia Stellata, Magnolia hypolenca, Magnolia parviflora, Cornus aurea variegata Spathii, Cornus sanguinea elegantissima, Cornus Florida flore rubra, Cerasus japonica rosea pendula, Cersis japonica, Ptelea trifoliata aurea, Sambucus Nigra aurea, Prunus pissardi, Styrax japonica, Styrax Americana, Catalpa syringaefolia aurea, Catalpa purpurea, Andumeda arborea, Aesculus hippocastranum memmingerii, Fagus sylvatica

atropurpurea, Clethia barbinervis, Enonymus elatus, Liriodendron tulipifera variegata, Benthamica japonica, Viburnum delatatum, Viburnum japonicum Sieboldii, Viburnum japonicum Sieboldii variegatum, Spiraea Thunbergii, Quercus pubescens cucullata, Quercus pubescens Concordia, Quercus cerris dentatateum, Quercus robusta Nigricans.

MAPLES.

One specimen of each of the following varieties: Acer Polymorphus Dissectum Atropurpureum, Acer Polymorphus Sanguineum, Acer Polymorphus cristatum, Acer Polymorphus Dissectum fictum, Acer Dissectum rose petus, Acer Polymorphus reticulatum, Acer Polymorphus roseum, Acer Polymorphus sanguineum crispeum, Acer Polymorphus Nigricans, Acer dasycarpum, Acer heterophyllum laciniatum, Acer japonicum heterophyllum, Acer tripartitum, Acer platanoides Schwedlerii, Acer palmatum, Acer palmatum pendula, Acer truneatum, Acer digitatum folis aureo marginatis, Acer cucullatum, Acer Monspessulanum, Acer rubrum.

ORNAMENTAL SHRUBS.

One specimen of each of the following varieties: Juniperus japonica aurea, Juniperus Sabina vera, Retinispora Squarrosa, Retinispora filifera, Retinispora obtusa nana, Retinispora filifera aurea, Retinispora plumosa aurea, Retinispora plumosa, Thuya occidentalis Brinkerhoff, Thuya occidentalis alba, Thuya occidentalis conica densa, Thuya occidentalis Vuvaeneana, Thuya occidentalis compacta, Thuya occidentalis recurva, Thuya occidentalis aurea maculata, Thuya occidentalis pumila, Thuya occidentalis aurea, Thuya occidentalis Hueyii, The Gem, Biota orientalis elegantissima, Tsuga Canadensis Sargentii pendula, Tsuga Canadensis Macrophylla, Tsuga repanda glaucas, Tsuga Canadensis abrovirens, Picea omorika, Picea orientalis, Picea Remontii, Picea Engelmannii, Picea excelsa Maxwelliana nana, Picea excelsa Fiuedonesis, Picea excelsa Gregoriana, Picea alba aurea, Picea Alcockiana nova, Picea excelsa pundula, Picea excelsa conica, Picea excelsa pyramidata, Picea excelsa diffusa, Picea excelsa elata, Picea Nigra pumila, Picea pungens glauca, Pinus Sylvestus aurea, Pinus compacta pumila, Pinus parviflora, Pinus cembra Helvetica, Piuus Peuce, Pinus compacta vuvea, Pinus Monticola, Piuus Mughus pumila, Fagus Sylvatica laciniata, Abies excelsa aurea, Abies Veitchii, Abies Nobilis glauca, Abies Nordmannianas, Abie Pichta.

AZALEAS — DISPLAY OF HARDY AZALEAS.

Two specimens of each of the following varieties: Asa Gray, Kissena, Distinction, Lutes grandiflora, Flushing Queen, Richardii, Roc des Belges, Arborea, Punicea, Flammeola, Versicolor, Professor Kirtland, Cordon, Gloria Mundi, Prince of Orange, Belle Janette, Bouquette de Flore, Formosa, Cruenta, Obtima, Adelaide, Rosea rotundifolia, Wm. C. Bryant, Grandeur triumphant.

RHODODENDRONS.

Display of Rhododendrons in choice varieties, two specimens of each: General Grant, Everestianium, Roseum Elegans, Roseum Leteum, Album Grandiflorum, Grandiflorum Parsons, Delicatissimum, Flushing, Purpureum Crispum, Perspicum, Abraham Lincoln, H. H. Hunnewell, Bicolor, Senator Sumner, General Sherman, Herbert Parsons.

## PICKLEMAN, S., BUFFALO.

1 Cycas Revoluta, 3 Yucca Aloefolia Variegata, 1 Lauris Nobilis, 1 Musa Ensete, 14 Cyclamen Persicum, 6 Ohpiopogin Juburan Variegata.

## PIERSON, F. R., & CO., TARRYTOWN-ON-THE-HUDSON.

CANNAS.

4,100 plants of the following varieties: 25 Admiral Gervais, 50 Count Horace de Choiseul, 25 Maurice Musy, 50 Paul Bruant, 100 Secretary Stewart, 50 Senateur Montefiore, 50 Explorateur Crambel, 100 J. D. Cabos, 50 President Carnot, 200 Charles Henderson, 300 Miss Sarah Hill, 900 Alphonse Bouvier, 700 Paul Marquant, 300 Capt. P. De Suzzoni, 100 Francois Crozy, 1,100 Madame Crozy.

ROSES.

Cut roses consisting of 500 long stem "Meteor" Rose.

## PITCHER & MANDA.

Flowers sent for Manhattan day: 500 Chrysanthemum blooms in 20 varieties, single and double Dahlia blooms, 500 sprays of Hilianthuses.

## PRATT, MRS. CHARLES L., BROOKLYN.

ORNAMENTAL FOLIAGE PLANTS, ETC.

1 Cyperus alternifolius, 1 Musa Cavendishii, 1 Maranta veitchii, 1 Croton veitchii, 1 Croton Mooreiana, 1 Dracaena fragrans, 1 Pandanus veitchii, 1 Curculigo recurvata, 10 Tradescantia virides vittata, 10 Tradescantia zebrina multicolor, 10

Tradescantia vulgaris, 10 Tradescantia discolor, 10 Abutilon megapotamicum variegata, 10 Senecio mikanoides, 10 Vinca major variegata, 10 Maurandya Barclayana, 10 Ficus stipulata, 10 Ficus stipulata minima.

PROSPECT PARK, BROOKLYN.

ORNAMENTAL FOLIAGE PLANTS, ETC.

2 Euphorbia splendens, 5 feet in diameter; 1 Latauia Borbonica, 8 feet high; 1 Pandanus Utilis, 4 feet high; 2 Seaforthia elegans, 12 feet high; 2 Araucaria excelsa, 8 feet high; 1 Caryota urens, 12 feet high; 1 Areca lutescens, 8 feet high.

REBSTOCK, J. H., BUFFALO.

4 Diacaena Iudivisia, 2 Dracaena Ferrea, 2 Adiantum Cuneatum, 2 Blechnum Flaxineum, 4 Pteris Argyrea, 2 Gloxinia Grandiflora, 2 Rex Begonias, 2 Fancy Caladiums, 2 Cyperus Alternefolius, 2 Begonia Rubra.

REED & KELLER, NEW YORK CITY.

Exhibit of florist wire: Designs, consisting of 200 new and novel designs in wire-work, as used by florists.

ROBERTS, D. H., NEW YORK CITY.

Natural gas made glass, as used for rose houses, conservatories, etc.; and all kinds of horticultural architecture.

ROEHRS, JULIUS.

PALMS.

Four specimen Latania Borbonica, each 8 feet spread.

CUT FLOWERS.

Cut flowers sent for Manhattan day: 500 Carnations in 6 varieties; 500 Cut Roses in 5 varieties; 500 Chrysanthemum blooms in 10 varieties.

ROEHRS, THEODORE, NEW YORK CITY.

CUT FLOWERS.

Cut flowers sent for Manhattan day: 500 cut Roses in 5 varieties; 500 Carnations in 6 varieties; 500 Chrysanthemums in 10 varieties.

ROESCH, LEWIS, FREDONIA.

Ornamental trees and general nursery stock.

SATTFORD, W. G., POUGHKEEPSIE.

Two specimens dracaena lindenii.

SCHMUTZ, LOUIS, L. I.

6 Pandanus Utilis, 2 Pandanus Veitchii, 6 Dracaena indivisa, 6 Grevillia robusta, 12 Pillea muscosa, 6 Adiantum cuncatum, 25 Pteris cristata, 12 Lycopodium densum, 12 Lycopodium denticulata aurea, 12 Hedera helix Hibernica.

SCHOLES, FREDERICK, BROOKLYN.

COLLECTION OF ORCHIDS.

3 Cattleya Gigas, 1 Cattleya Dormaniana, 5 Cattleya Percivaliana, 5 Cattleya Mendelii, 3 Cattleya Bowringiana, 2 Cattleya Intermedia, 8 Cattleya Speciosissima, 7 Cattleya Trianae, 1 Cattleya Schroederae, 1 Cattleya Schilleriana, 2 Cattleya Skinnerii, 1 Cattleya luteola, 2 Cattleya imperialis, 1 Cattleya Amethystina, 1 Cattleya Guttata, 4 Oncidium Papilio, 1 Oncidium Cavendishii, 4 Oncidium Sphacelatum, 1 Oncidium Lanceanum, 1 Oncidium Monophyllum, 1 Oncidium trulliferum, 1 Oncidium Sprucei, 3 Laelia Purpurata, 2 Laelia Perrinii, 1 Laelia Peduncalaris, 1 Laelia Autumnalis, 2 Laelia Anceps, 1 Laelia Annabarina, 1 Laelia Xanthina, 1 Dendrobrum Pierardii, 1 Dendrobrum thysiflorum, 1 Dendrobrum nobilis, 1 Epidendrum falcatum, 1 Epidendrum carpleanum, 1 Epidendrum species, 1 Epidendrum fragrans, 2 Epidendrum nemorale, 1 Epidendrum raniferum, 1 Miltonia Stellata, 1 Miltonia Clowesii, 1 Miltonia spectabilis, 2 Brassavola Nodosa, 2 Brassavola glauca, 3 Schombrugkia crispa, 1 Schombrugkia tibicinis, 7 Stanhopea grandiflora, 6 Stanhopea tigrina, 1 Angraecum Leonis, 1 Brassia Verucosa, 1 Coelogyne pandurata, 1 Lycaste Skinnerii, 2 Trichopilia sauvis.

CROTONS.

3 Croton Aucubaefolium, 3 feet high; 1 Croton Andreanum, 2 feet high; 1 Croton Disraeli, 2 feet high; 20 Croton Interruptum, 2 feet high; 20 Croton Nobilis, 1 1-2 feet high; 12 Croton Pictum, 2 feet high; 9 Croton Queen Victoria, 1 1-2 feet high; 7 Croton Augustifolium, 1 1-2 feet high; 6 Croton Bergmanni, 1 1-2 feet high; 7 Croton Chelsoni, 10 inches high; 7 Croton Volutum, 1 foot high; 2 Croton Undulatum, 1 foot high.

PALMS, ETC.

3 Corypha Australis, 4 feet high; 2 Corypha Australis, 2 feet high; 3 Areca lutescens, 5 feet high; 4 Sanseviera zealanica, 9 Kentia Belmoriana, 3 feet high; 1 Latania Borbonica, 3 feet high; 1 Latania Borbonica, 1 1-2 feet high; 1 Cycas revoluta, 2 feet high; 1 Eucharis Amazonica, 2 feet in diameter; 2 Ananassa

Porteana folia variegata, 1 1-2 feet high; 1 Dracaena Baptisti, 1 1-2 feet high; 1 Bilbergia Zebrina, 1 Tradescantia tricolor, 2 Pandanus Veitchii, 2 feet high; 4 Pandanus Veitchii, 1 foot high; 4 Aspidistra Lurida, 1 Platycerium alcicorne.

SCHWEINFURTH, F. V.

Cut flowers, collection of cut Chrysanthemums, collection of cut Ferns.

SCOLLAY, JOHN A., BROOKLYN.

FLORISTS' SPRINKLERS.

Improved Putty Bulk for glazing sash, etc., Patent Plant Sprinkler, Cut Flower Sprinklers in several sizes.

SCOTT, WILLIAM, BUFFALO.

1 hanging basket of Begonias, 12 plants Tuberoses, 12 plants Tuberous Begonias (Laing's strain), 12 plants Gloxinia Crassifolio Erecta grandiflora, 12 plants Lilium Lancifolium rubrum, 12 plants Adiantum cuneatum, 6 plants Pteris Hastata, 6 plants Pillia Muscosa, 25 plants Cobea Scandens.

SIEBRECHT & WADLEY, NEW YORK CITY.

One specimen Ovirandra fenestralis.

SMALL, J. K., & SONS, NEW YORK CITY.

FLOWER DESIGN.

Model of United States Capitol, twenty-eight feet long and twelve feet wide, made of Cape flowers. The model is a perfect representation of the national building.

THE STECHER LITHOGRAPH CO., ROCHESTER.

Display of hand-painted flower and fruit plates for horticultural illustrations.

STEFFENS, N., NEW YORK CITY.

Novel and original wire designs as used by retail florists.

STOPHER, WILLIAM, VASSAR COLLEGE, POUGHKEEPSIE.

Galvanized Wire Screw Plant Stakes in several sizes.

STOTT GARDEN IMPLEMENT CO., NEW YORK CITY.

GARDEN APPLIANCES.

Stott's Distributor, for automatically mixing insecticide; display of "Killmright," a non-poisonous insecticide used in the prevention of mildew and other diseases peculiar to plant life; Stott's Patent Sprayer, for using insecticide on plants; Stott's Patent Syringe, an automatic insecticide mixer; Stott's Fir-tree Oil Soap, an insecticide for plants; Stott's Common-Sense Lawn Sprinkler; Stott's Hose; Stott's Compound Tobacco Soap; Stott's Petroleum Soap; Stott's Whale Oil and Quassia Soap; Stott's Patent Pruners; Standard Hose Mender.

TAYLOR, JOHN H., BAYSIDE.

Cut flowers sent for Manhattan day: 500 cut roses in five varieties.

THORBURN, J. M., NEW YORK CITY.

PANSIES.

200 plants of each of the following varieties: Black Faust, Odier, Blotched, Trimardean, Bugnots superb mixed, Lord Beaconsfield, Pure Yellow, White, Dark purple, Atropurpurea alba marginata, Snow Queen, Farm color, Black blue, Extra large show, Quadricolor, Thorburn superb, Light blue, Violet margined, Striped, Emperor William, Bronze color, Azure blue.

MIGNONETTE.

100 Mignonette Miles Spiral, 100 Mignonette Golden Queen, 100 Mignonette Gabrielle, 100 Mignonette Crimson Queen, 100 Mignonette Machet, 100 Mignonette New Dwarf Red.

CALCEOLARIAS.

50 Calcaelaria Hybrida Nana, 50 Calcaelaria Hybrida Grandiflora.

CYCLAMEN.

100 Cyclamen giganteum robustum, 100 Cyclamen giganteum superbum, 100 Cyclamen giganteum atropurpureum, 100 Cyclamen giganteum album Mt. Blanc, 100 Cyclamen giganteum robustum Hybridum, 100 Cyclamen giganteum Roseum.

CINERARIAS.

50 Cinerarias hybrida mixed.

PRIMULAS.

50 Primula Sinensis fimbriata, 50 Primula Sinensis fimbriata globosa, 50 Primula Sinensis fimbriata filicifolia in variety.

MISCELLANEOUS PLANTS USED AS VINES BY THE WORLD'S FAIR FLORICULTURAL DEPARTMENT, IN THE CONSTRUCTION OF THE MOUND IN THE CENTER OF THE HORTICULTURAL DOME.

25 Utirica nivea, 25 Chila squash, 50 Tom's pumpkin, 50 Apple egg gourd, 25

AGRICULTURAL BUILDING

Apple dipper gourd, 25 Egg-shaped gourd, 25 Flat striped gourd, 25 Hercules club gourd, 25 Onion-shaped gourd, 25 Pear-shaped gourd, 25 Powder horn gourd, 25 Miniature bottle gourd, 25 Sugar trough gourd, 12 Cucumis aculangulus gourd, 12 Cucumis pereunis, 12 Cucumis odoratissimus, 12 Cucumis Flexiosus, 12 Cucurbita Lagerenaria, 25 Cucurbita aurantia, 25 Cucurbita melopepo, 25 Cucumis erinacens, 25 Cucumis glossulariae folius, 25 Cylanithera explodens, 25 Eopepon Vitifolius, 25 Echinocystis, 100 Cineraria Marieteum, 25 Tuber Dolichos batatas.

TRICKER, WILLIAM, DONGAN HILLS.

AQUATICS.

238 plants of the following varieties: 4 Nymphæa Mexicana, 6 Nymphæa Lotus, 2 Nymphæa Gracilis, 4 Nymphæa odorata, 4 Nymphæa odorata minor, 6 Nymphæa odorata gigantea, 8 Nymphæa odorata Caroliniana, 6 Nymphæa odorata sulphurea, 4 Nymphæa odorata rosea, 4 Nymphæa Marliacea albida, 4 Nymphæa Marliacea carnea, 8 Nymphæa Marliacea chromatella, 6 Nymphæa Marliacea rosea, 4 Nymphæa Pygmea alba, 4 Nymphæa Pygmea Helviola, 4 Nymphæa alba, 8 Nymphæa alba candidissima, 4 Nymphæa candida, 6 Nymphæa Laydekeri rosea, 4 Nymphæa Devoniensis, 4 Nymphæa Devoniensis superba, 8 Nymphæa Dentata, 8 Nymphæa Sturtevantii, 4 Nymphæa Rubra, 4 Nymphæa Cœrulea, 4 Nymphæa Gigantea, 8 Nymphæa Zanzibarensis, 4 Nymphæa Zanzibarensis rosea, 4 Nymphæa Zanzibarensis azurea, 4 Nymphæa Sartifolia, 4 Nymphæa Elegans, 1 Nymphæa Deaniana (New), 1 Nymphæa Smithiana (New), 1 Nymphæa Delicatissima (New), 1 Nymphæa Columbiana (New), 4 Nelumbium Speciosum, 4 Nelumbium Karmesinum, 4 Nelumbium Roseum, 4 Nelumbium Album striatum, 1 Victoria Randi, 1 Victoria Regia, 2 Euryale Ferox, 2 Sagittaria Montevidiensis, 6 Limnocharis Hulboldtii, 12 Cyperus Papyrus, 6 Cyperus Natalensis, 12 Cyperus Alternifolius, 4 Thalia dealbata, 6 Eichbornea Crassipes major, 6 Aponogeton distachyon.

Cut ornamental grasses and decorative material sent for Manhattan day at the fair.

WARD, C. W., EAST MORICHES.

Cut flowers sent for Manhattan day: 2,000 carnation blooms in 25 varieties.

WEATHERED, THOMAS W., & SONS, NEW YORK CITY.

Horticultural architecture, modes of construction, appliances, etc.; villa conservatory, 32 feet by 18 feet; construction, decorating, heating, ventilating, benching, etc.; hot water boiler, hot water pipes and heating apparatus; villa conservatory, furnishing of plants and flowers, with practical illustrations of their cultivation.

WEBB, MRS. H. W., NEW YORK CITY.

HERBARIUM.

Dried specimen ferns and flowers consisting of many hundred specimens of plants and flowers, native of New York State.

WEIR, JAMES, & SONS, BROOKLYN.

PALMS AND ORNAMENTAL FOLIAGE PLANTS.

12 specimens Latani Borbonica, 8 feet high, 12 feet spread; 12 specimens Pandamus Utilis, 6 to 8 feet high; 1 specimen Chamaerops Fortunii, 8 feet high; 1 specimen Chamaerops Excelsa, 7 feet high.

WHILLDIN POTTERY CO., LONG ISLAND CITY.

PLANT POTTERY, ETC.

Fancy jardinieres; plant pots as used for commercial trade; ornamental plant pots as used for conservatory plants; earthenware seed pans; propagating pans; fern, moss and orchid pans.

YOUNG, JOHN, NEW YORK CITY.

Improved cut flower boxes as used for shipping flowers to distant points; cut flowers; 500 cut carnation blooms in 12 varieties; 500 dahlia blooms in 20 varieties; 500 cut roses in 10 varieties; 250 specimens chrysanthemum blooms in 15 varieties. The above display of cut flowers were sent for Manhattan day.

ZELLAR, CHARLES, & SONS, FLATBUSH.

Twelve specimen orange trees bearing fruit; citrus chinensis.

ZIEGELE. ALBERT, BUFFALO

One specimen Dion Edule.

# INDIVIDUAL EXHIBITS IN HORTICULTURAL BUILDING.

## GROUP 20.

Barnes, Wm. D., Middlehope; staking and training grape vines.
Emerson, S. M., & Sons, Washingtonville; wines and brandy.
Feltzer, J. P., Rochester; grape and cider brandy.
Hanser, Christian, Rochester; wines and champagnes.
Maxfield, D. H., Naples; wines.
Randall, F. N., Ripley; method staking and training vines.
Ryckman, G. E., Brocton; wines and brandy.
Smith, E. Ashley, Lockport; unfermented wine.
Wolf, Franz S., Bath; wines.

## GROUP 21.

Brunswick, M. & Co., Rochester; fruit plates and literature.
Curtice Bros. Co., Rochester; canned and preserved fruits, jellies, etc.
Genesee Fruit Co., New York; evaporated apples, cider.
New York, State of; pomaceous, small and canned fruits.
Ripley Cider Purifier Co., Sherman; cider purifier and pulp washer.
Stecher Lithographic Co., Rochester; lithographed fruit plates.

## GROUP 22.

Allen, J. K., New York; cut flowers.
Amman, Charles, New York; foliage plants.
Bebus & Patterson, New York; cut flowers.
Blondin, John, Long Island City; cut flowers.
Demensy, Alfred, Flatbush; cut carnations.
Dinsmore, Wm., Staatsburgh; palms and crotons.
Ellerton, J., Auburn; plants.
Forsterman, J., Newton; orchids.
Freeman, L., Whitestone; palms.
Hart, Jas., New York; cut roses and carnations.
Hart, M. A., New York; cut roses and carnations.
Heinman, A., New York; dried cape flowers.
Hoffman & Hart, New York; cut roses, etc.
Howe, Mrs. Fisher, Brooklyn; foliage plants.
Jeffreys & Son, Bellmore; coleus.
Lawrence, Geo., Long Island City; cut carnations.
Leach Bros., Long Island City; cut carnations.
Matthews, Geo., Great Neck; cut carnations.
Meisseberg, Augustus, Flatbush; cut roses and carnations.
Millang Bros., New York; cut roses and carnations.
Phillips, Jno. V., Brooklyn; cut roses and carnations.
Roehrs, Theo., New York; cut carnations and roses.
Schultheis, Anton, College Point; cut roses and carnations.
Sheridan, Wm. F., New York; cut roses and carnations.
Siebrecht, L., Floral Park; cut carnations.
Siebrecht, Wm. H., Long Island City; cut carnations.
Siebrecht & Wadley, New York; orchids and palms.
Spaulding, F. A., Riverdale; foliage plants.
Vick, Jas., & Sons, Rochester; pansies.
Wipperman, Herman, Brooklyn; cut carnations.
Young Bros., New York; cut roses and carnations.

## GROUP 23.

Curtice Bros. Co., Rochester; canned vegetables, pickles, ketchup, etc.

## GROUP 26.

New York Central Iron Works, Geneva; greenhouse boiler.
Roome, Stabb & Co., New York; portable summer house.
Rose, N. Jonson, New York; designs of parks, gardens, etc.

# REPORT ON THE BOTANICAL EXHIBIT OF THE STATE MUSEUM.

BY CHARLES H. PECK, STATE BOTANIST.

HORTICULTURE — GROUP 23 — EDIBLE FUNGI.

With the consent of the Regents of the University, trustees of the State Museum, an exhibit of dried specimens of New York's species of fungi was made at the World's Columbian Exposition. The specimens were taken from and belong to the State herbarium. They were limited in number, because of the short time given to their preparation and because of the limited space alloted for their exhibition. The space assigned was 160 square feet, on which four table cases with glass tops were placed. Each case was ten feet long and about four feet wide, the center being slightly elevated so that the top and bottom sloped from it in each direction toward the sides. It was thought that this mode of construction would be most favorable to the inspection of the specimens. Specimens of fungi only were selected for exhibition because a satisfactory general exhibit of the specimens of the herbarium could not well be made in so small a space and because these would possess an interest and novelty that would be wanting in specimens belonging to other departments of botany. Besides, New York State has been a pioneer, so to speak, in the investigation of her mycological flora and her State herbarium is especially rich in representatives and types of these plants, and it, therefore, seemed fitting that she should show the world her advanced position in this direction as well as in others. Though these plants often possess less popular attractions than others having greater size, brighter colors and more symmetry of form, yet they are scarcely inferior to any class of plants in economical interest and importance. The result has confirmed the wisdom of their selection for exhibition, for while there were many exhibits of herbarium specimens of flowering plants and some of ferns and algae, there was no other general exhibit of specimens of fungi. The Department of Agriculture at Washington and the Agricultural Experiment Stations had exhibits of parasitic species injurious to cultivated plants, and the former had an exhibit of models of some edible and harmful mushrooms, as well as parasitic species, but New York's exhibit was much more comprehensive. Even this was limited to such species as have some economical character or importance, but all the great groups or divisions of fungi were represented. There were sixty-one species of edible fungi, sixty-three species of wood-inhabiting and wood-injuring fungi, including a few examples of wood showing the effect of permeating and destructive mycelium, eighteen species of parasitic fungi injurious to cultivated and useful plants, the host plants plainly showing the effects of the presence of the fungus, and six species injurious to noxious weeds and animals, and, therefore, to be regarded as beneficial to man by aiding him in keeping his enemies in subjection. The total is 148 species.

These were represented by an average of probably seven or eight specimens each, so that the whole exhibit consisted of about 1,000 specimens. With the exception of the representatives of the parasitic species, which were mostly mounted on ordinary herbarium sheets of paper, the specimens were exhibited in white pasteboard trays, six inches long and four inches broad or some multiple of these. In this way there was a greater economy of space than would have been possible if the specimens had been mounted. Each species was accompanied by a label, printed in clear, bold type, giving its botanical or Latin name, its corresponding common or English name, and the name of the county or counties whence the specimens came. In many cases the variability of the species was such as to require a series of specimens to illustrate the different forms and varieties. Along the center of the cases, at moderate intervals, larger labels were placed indicating the economic character of the specimens in their respective intervals. On the top of the cases, at suitable distances from each other, four porcelain tablets were set up, inscribed "Fungi of the State of New York," etc.

That this exhibition of fungi was especially useful, as an educator of the people, admits of no question. The character of the remarks made by visitors concerning it and the numerous questions asked by them concerning its nature and character, indicated very clearly that there was much need of, and desire for, a greater knowledge of these things among the people. The specimens were on exhibition from May first to October thirtieth. They have been returned to the State herbarium in good condition, with two or three exceptions. The dampness of the atmosphere in the Horticultural Building was such as to cause all the specimens of one species and a part of those of two others to become affected with mold.

A list of the species of which specimens were on exhibition and of the varieties and forms follows.

## CATALOGUE OF SPECIES AND VARIETIES OF NEW YORK FUNGI EXHIBITED.

### EDIBLE FUNGI.

Amanita cæsarea, *Scop.*
Amanita rubescens, *Fr.*
Amanita rubescens, wartless form.
Amanitopsis vaginata, (*Bull.*).
Amanitopsis vaginata, Var. fulva, (*Schæff*).
Amanitopsis vaginata, Var. livida, (*Pers.*).
Amanitopsis vaginata, Var. nivalis, (*Grev.*).
Lepiota procera, *Scop.*
Lepiota naucinoides, *Peck.*
Armillaria mellea, *Vahl.*
Armillaria mellea, clustered form.
Armillaria mellea, Var. bulbosa, *Peck.*
Armillaria mellea, Var. albida, *Peck.*
Armillaria mellea, Var. glabra, *Gill.*
Tricholoma transmutans, *Peck.*
Tricholoma imbricatum, *Fr.*
Tricholoma personatum, *Fr.*
Clitocybe nebularis, *Batsch.*
Clitocybe media, *Peck.*
Clitocybe infundibuliformis, *Schaeff.*
Clitocybe cyathiformis, *Fr.*
Clitocybe laccata, *Scop.*
Clitocybe laccata, Var. amethystina, (*Bolt.*)
Clitocybe laccata, Var. pallidifolia, (*Peck*).
Clitocybe laccata, Var. striatula, (*Peck*).
Pleurotus ulmarius, *Bull.*
Pleurotus ostreatus (*Jacq.*), *Fr.*
Pleurotus sapidus, *Kalchb.*
Hygrophorus virgineus, *Fr.*
Hygrophorus pratensis, *Fr.*
Hygrophorus miniatus, *Fr.*
Lactarius deliciosus, *Fr.*
Lactarius volemus, *Fr.*
Lactarius subdulcis, *Fr.*
Russula virescens, *Fr.*
Cantharellus cibarius, *Fr.*

HORTICULTURE, Fungi Exhibit

Marasmius oreades, *Fr.*
Cortinarius collinitus, *Fr.*
Cortinarius violaceus, *Fr.*
Cortinarius armillatus, *Fr.*
Cortinarius cinnamomeus, *Fr.*
Cortinarius cinnamomeus, Var. semisanguineus, *Fr.*
Paxillus involutus, *Fr.*
Agaricus arvensis, *Schæff.*
Agaricus silvicola, *Vitt.*
Agaricus campester, *L.*
Agaricus placomyces, *Peck.*
Coprinus comatus, *Fr.*
Coprinus atramentarius, *Fr.*
Coprinus atramentarius, Var. silvestris, *Peck.*
Coprinus micaceus, *Fr.*
Coprinus micaceus, Var. conicus, *Peck.*
Boletus scaber, *Fr.*
Boletus scaber, Var. niveus, *Fr*
Boletus subluteus, *Peck.*
Boletus subtomentosus, *L.*
Boletus affinis, *Peck.*
Boletus castaneus, *Bull.*
Polyporus sulphureus, *Fr.*
Hydnum repandum, *L.*
Hydnum rufescens, *Pers.*
Hydnum coralloides, *Scop.*
Fistulina hepatica, *Fr.*
Craterellus cornucopioides, *Pers.*
Clavaria botrytes, *Pers.*
Clavaria flava, *Schæff.*
Clavaria cristata, *Pers.*
Lycoperdon cyathiforme, *Bosc.*
Morchella esculenta, *Fr.*
Morchella conica, *Pers.*
Morchella augusticeps, *Peck.*
Morchella deliciosa, *Fr.*
Morchella semilibera, *D. C.*
Gyromitra esculenta, *Fr.*
Helvella crispa, *Fr.*
Mitrula vitellina, *Sacc.*
Mitrula vitellina, Var. irregularis, *Peck.*

FUNGI GROWING ON AND INJURIOUS TO WOOD.

Panus stipticus (*Bull.*) *Fr.*
Panus operculatus, *B. & C.*
Lenzites betulina, *Fr.*
Leuzites vialis, *Peck.*
Lenzites sepiaria, *Fr.*
Lenzites sepiaria, Var. porosa, *Fr.*
Schizophyllum commune, *Fr.*
Polyporus elegans, *Fr.*
Polyporus osseus, *Kalchb.*
Polyporus chioneus, *Fr.*
Polyporus guttulatus, *Peck.*
Polyporus undosus, *Peck.*
Polyporus crispellus, *Peck.*
Polyporus fumosus, *Fr.*
Polyporus adustus, *Fr.*
Polyporus adustus, Var. carpineus, (*Sow.*).
Polyporus Weinmanni, *Fr.*
Polyporus borealis, *Fr.*
Polyporus pubescens, *Fr.*
Polyporus cuticularis, *Fr.*
Polyporus nidulans, *Fr.*
Polyporus gilvus, *Schw.*
Polyporus glomeratus, *Peck.*
Polyporus resinosus, *Fr.*
Polyporus betulinus, *Fr.*
Polyporus volvatus, *Peck.*
Polyporus lucidus, *Fr.*
Polyporus pinicola, *Fr.*
Polyporus applanatus, *Wallr.*
Polyporus fomentarius, *Fr.*
Polyporus fomentarius, Var. zonatus, *Peck.*
Polyporus igniarius, *Fr.*
Polyporus nigricans, *Fr.*
Polyporus connatus, *Fr.*
Polyporus carneus, *Nees.*
Polyporus carneus, Var. subzonatus, *Peck.*
Polyporus conchatus, *Fr.*
Polyporus piceinus, *Peck.*
Polyporus biformis, *Klotz.*
Polyporus conchifer, *Schw.*
Polyporus aureonitens, *Pat.*
Polyporus hirsutus, *Fr.*
Polyporus hirsutus, Var. albiporus, *Peck.*
Polyporus hirsutus, Var. migromarginatus (*Schw.*).
Polyporus zonatus, *Fr.*
Polyporus versicolor, *Fr.*
Polyporus versicolor, Var. fumosiporus, *Peck.*
Polyporus pergamenus, *Fr.*
Polyporus pergamenus, Var. elongatus (*Berk.*).
Polyporus pergamenus, Var. pseudopergamenus (*Thum.*).
Polyporus abietinus, *Fr.*
Polyporus abietinus, Var. irpiciformis, *Peck.*
Glœoporus conchoides, *Mont.*
Poria subacida, *Peck.*
Trametes suaveolens, *Fr.*
Trametes cinnabarina, (*Jacq.*) *Fr.*
Trametes Trogii, *Berk.*
Trametes mollis, *Fr.*
Trametes sepium, *Berk.*
Dædalea quercina, *Pers.*
Dædalea unicolor, *Fr.*
Dædalea unicolor, Var. fumosipora, *Peck.*
Dædalea confragosa, *Pers.*
Dædalea confragosa, Var. Cookei, *Peck.*
Dædalea confragosa, Var. rubescens, *Peck.*
Dædalea confragosa, Var. Klotzschii, *Peck.*
Merulius tremellosus, *Schrad.*
Merulius lacrimans, *Fr.*
Irpex cinnamomeus, *Fr.*
Odontia lateritia, *B. & C.*
Stereum sericeum, *Schw.*
Stereum complicatum, *Fr.*
Stereum complicatum, Var. laceratum, *Peck.*

Stereum bicolor, *Fr.*
Stereum versicolor, *Fr.*
Chlorosplenium æruginosum, *De N.*
Wood stained by its Mycelium.
Wood permeated by Mycelium.
Bark overrun by Mycelium.

FUNGI GROWING ON AND INJURIOUS TO CULTIVATED AND USEFUL PLANTS.

Glœosporium lagenarium, *S. & K.*
Plowrightia morbosa, (*Schw.*) *Sacc.*
Monilia fructigena, *Pers.*
Entomosporium maculatum, *Lev.*
Plasmopara viticola, *B. & De T.*
Phytophthora infestans, *De By.*
Peronospora parasitica, *Tul.*
Cladosporium fulvum, *Cke.*
Cercospora Apii. *Fres.*
Cercospora beticola, *Sacc.*
Puccinia Malvacearum, *Mont.*
Ustilago Maydis, *Cd.*
Ustilago Tritici, *Jensen.*
Ustilago Hordei, *K. & S.*
Ustilago Avenæ, *Jensen.*
Calyptospora Gœppertiana, *Kuhn.*
Dimerosporium Collinsii, *Thum.*
Hypoderma lineare, *Peck.*

FUNGI INJURIOUS TO NOXIOUS WEEDS AND ANIMALS.

Empusa Muscæ, *Cohn.*
Sporendonema myophilum, *Sacc.*
Cystopus candidus, *Lev.*
Puccinia suaveolens, *Rostr.*
Ustilago Cesatii, *Wald.*
Peronospora Linariæ, *Fckl.*

RECAPITULATION.

| | | |
|---|---|---|
| Edible fungi | 61 | species. |
| Fungi injurious to wood | 63 | species. |
| Fungi injurious to cultivated and useful plants | 18 | species. |
| Fungi injurious to noxious weeds and animals | 6 | species. |
| Total | 148 | |

# REPORT ON THE LIVE STOCK EXHIBIT.

By JAMES WOOD, Mt. Kisco, Superintendent.

The State Board of Managers decided to aid exhibitors of live stock by defraying the cost of transportation to and from Chicago, and of the feed required for the stock while at the exposition. Extended public notice was given of this, and much interest was aroused throughout the State. In order that only such animals should be sent to the exposition as would reflect credit upon the State, the director arranged for the inspection by competent judges of all animals offered whose quality was not already known to him. By this means no inferior animal was sent to Chicago. Manifestly the inspection of poultry was impracticable.

It was much to be regretted that the horse show was arranged for the month of August. The owners of the studs for which New York is famed, and breeders generally, objected to sending their valuable animals so far to be kept on exhibition in the hottest time of the year. As a consequence, the exhibit of horses from this State was very small, and altogether inadequate to the great importance of this interest. The exhibits of cattle, sheep and swine were much more complete, and reflected credit upon the State. The large number and amounts of prizes awarded to our exhibits emphatically attest their quality.

# CATALOGUE OF NEW YORK EXHIBITS IN DEPARTMENT C, LIVE STOCK.

## DIVISION A.— CATTLE.

Cooley, A. H., Little Britain; bulls, cows, heifers.
Cogswell, P. J., Rochester; heifers.
Davidson, G. Howard, Millbrook; bulls, cows, heifers.
Eno, Frank, Pine Plains; cows.
Hudson, Mrs. S. E., Alexandria; cows.
Kent, A. M., Jamestown; bulls, cows, heifers.
Pittsford Farm, Pittsford; bulls, cows, heifers.
Rood, Wm., Binghamton; bulls.
Sweet, C. A., Buffalo; cows.
Wilbur, D. F., Oneonta; bulls, cows, heifers.

## DIVISION B. — HORSES.

Clay Stock Farm, Long Island; horses, mares, stallions.
Hawley, E. F., Pittsford; horses, mares, stallions.
Hawley, F. W., Pittsford; stallions, Shetland ponies.
Otis, Ira L., Rochester; horses, mares, stallions.
Pittsford Farms, Pittsford; horses, mares, stallions.
Reynolds, M. F., Rochester; horses, mares, stallions.
Sharra, Robert M., Oswego; horses.
Sharra, J. B., Mexico; horses.

## DIVISION C. — SHEEP.

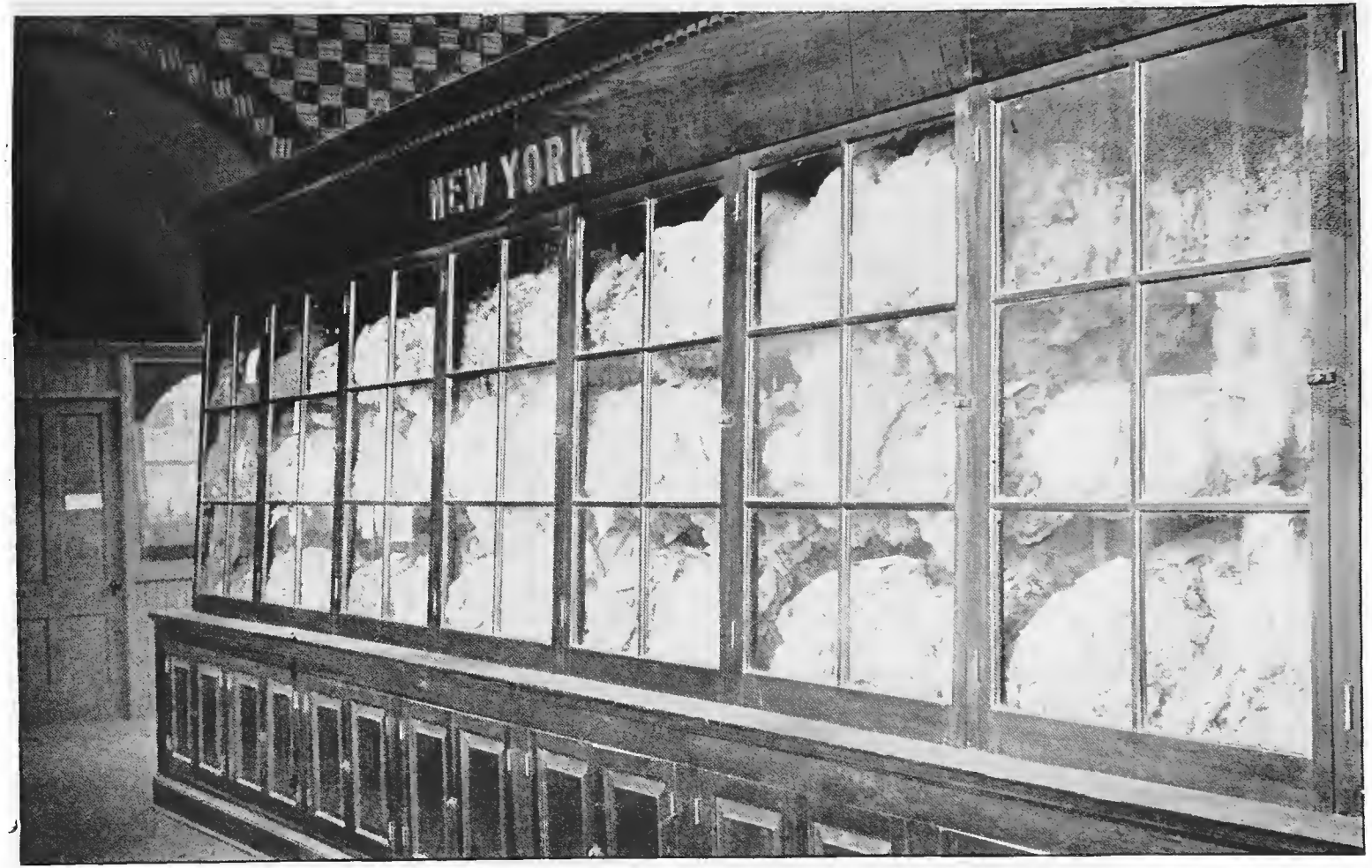
Barrett, F. W., Wadsworth, Southdowns.
Curry, Wm., & Son, Hartwick; Cheviots.
Curry, T. N., Hartwick; Cheviots.
Cossitt, Davis, Syracuse; Cheviots.
Earll, T. H., Skaneateles; Merinos.
Lee, R. M., South Bloomfield; Merinos.
Lusk, S. B., Batavia; Merinos.
Lough, Geo., Hartwick; Cheviots.
Martin, Peter, Rush; Merinos.
Martin, Geo. F., Rush; Merinos.
Page, Geo. A. and R., East Bethany; Merinos.
Smith, H. C., Marcellus; Merinos.
Van Dresser Bros., Cobleskill; Cheviots.
Wilbur, D. F., Oneonta; Cheviots.

## DIVISION D.— SWINE.

Crumb, E. W., Ouaquaga; Chester Whites.
Coe, R. E., Kirksville; Cheshires.
Doolittle, L. F., Ouaquaga; Cheshires.
Davis, E. W., Oneida; Cheshires.
Freeman & Button, Cotton's; Cheshires.
Hurlbut, B. J., Clymer; Cheshires.
Knapp Bros., Fabius; Berkshires, etc.
Metcalfe Bros., East Elma; Berkshires, etc.
Seeley, James, Geneva; Essex.
Spicer, W. E., Harvard; Berkshire.

## DIVISION F. — POULTRY.

Alvord, Frank C., Gloversville; breeding pens.
Bacon, Lewis A., Elmira; cocks, hens, cockerels, pullets.
Bishop, C. W., Verona; cockerels, pullets.
Bryant, B. F., Johnson's Creek; cocks, hens, cockerels, pullets, breeding pens.
Bentley, N., Conewango; bantam cocks, hens, cockerels, pullets, breeding pens.
Cornell, Ezra, Ithaca; cocks, hens, cockerels, pullets, breeding pens.
Earle, C. P., Gouverneur; cocks, hens, cockerels, pullets.
Garrison, L. & Co., Syracuse; cocks, hens, cockerels, pullets, breeding pens.
Gabriel, Martin, Jr., Buffalo; cocks, hens, cockerels, pullets.
Helbert & Brayer, Rochester; cocks, hens, cockerels, pullets, breeding pens.
Howell, C. E., Elmira; cocks, hens, cockerels, pullets.
Hammerschmidt, C., South Buffalo; cocks, hens, cockerels, pullets, breeding pens.
Hungerford, Chas. S., New York city; cocks, hens, cockerels, pullets.
Hazard, James E., Elmira; cocks, hens, cockerels, pullets.




WOOL EXHIBIT

Heath, G. W., Amsterdam; cocks, hens, cockerels, pullets.

Jerome, C. W., & Co., Fabius; cocks, hens, cockerels, pullets.

Knapp Bros. Fabius; cocks, hens, ducks.

Knapp, B. R., Cortland; cocks, hens, cockerels, pullets, breeding pens.

Knapp, Wm., Cortland; cocks, hens, cockerels, pullets, breeding pens.

Knox, J. F., Buffalo; cocks, hens, cockerels, pullets, breeding pens.

Lewis, Frank D., & Bro., Amsterdam; cocks, hens, cockerels, pullets.

Moody, W. H., Elmira; cocks, hens.

Miller, C. L., Addison; cocks, hens, breeding pens.

O'Neill, J. E., Elmira; cocks, hens, cockerels, pullets.

Pinckney, Daniel S., Onondaga; cocks, hens, cockerels, pullets, breeding pens.

Peer, Geo. E., Rochester; pigeons, trumpeters.

Requa, E. L., Highland Mills; cocks, hens, cockerels, pullets.

Richardson, W. M., Troy; rabbits.

Shafer, W. A., Oneonta; cocks, hens, geese.

Spraker, J. A., Sprakers; breeding pens.

Tillinghast, C. H., Hamburgh; cocks, hens, cockerels, pullets, breeding pens.

Thompson, R. P., Patterson; cocks, hens, cockerels, pullets, breeding pens.

Thompson, E. B., Amenia; cocks, hens, cockerels, pullets, breeding pens.

Thompson, J. H., Jr., Patterson; cocks, hens, cockerels, pullets, breeding pens.

Taylor, D. F., De Ruyter; cocks, hens, cockerels, pullets, breeding pens.

Tallinger, John F., Rochester; cocks, hens, cockerels, pullets.

Wilcox, Jones, East Chatham; cocks, hens.

Wilson, J. D., Worcester; cocks, hens, cockerels, pullets, breeding pens.

Wharburton, Wm. H., Willow Creek; cocks, hens, cockerels, pullets, breeding pens.

Wheeler, Mrs. W. P., Geneva; cocks, cockerels, pullets, breeding pens.

White & Dennison, Marilla; cockerels, pullets.

GROUP 28.— CATTLE FOODS.

American Glucose Co., Buffalo; stock food.

Smith & Romain, New York; stock food.

# CATALOGUE OF NEW YORK EXHIBITS IN DEPARTMENT D, FISH, FISHERIES, ETC.

GROUP 37.

Ams, Max, New York; sturgeon mounted.

Quackenbos, J. D., New York; painting and specimens of Sunapee trout.

GROUP 38.

Ams, Max, New York; sturgeon gill nets and boats for sturgeon fishing.

Court, J. W., Brooklyn; fish hooks.

GROUP 39.

Buel, J. T., & Co., Whitehall; artificial baits and trolling spoons.

Forest and Stream Publishing Co., New York; publications and illustrations of angling.

Harris, Wm. C., New York; paintings and publications of angling.

Skinner, G. M., Clayton; trolling spoons.

Spalding, A. G., & Bro., New York; fishing rods.

Von Hofe, Julius, Brooklyn; fishing reels.

Wood's Sons, Reuben, Syracuse; portrait of Reuben Wood.

Yawman & Erbe, Rochester; fishing reels.

GROUP 40.

Ams, Max, New York; smoked and canned fish, caviare, sturgeon oil and scrap.

Kahrs, Friman, New York; dry fish glue.

Major, A., New York; fish cement.

Meierdiercks, J. A., & Sons, New York; salt and preserved fish.

Wolff & Reessing, New York; canned sardines.

GROUP 41.

Loery, Bernhard, New York; aquarium.

DAIRY BUILDING

# REPORT ON THE SCIENTIFIC EXHIBIT.

## DEPT. E.—MINES AND MINING.

By FREDERICK J. H. MERRILL, PH. D., Superintendent.

At the request of the Board of Managers of the Exhibit of the State of New York at the World's Columbian Exposition, it was voted by the Regents of the University, September 29, 1892, to place the scientific exhibit of New York State at the World's Fair in charge of the New York State Museum, and the task of preparing this exhibit was assigned to the assistant director. In this exhibit the attainment of two objects was aimed at: First, to make as exhaustive a display as possible of the natural economic resources of the State, and, second, to show the collections derived by loan from the State Museum, and those secured directly by purchase in the method of grouping and arrangement employed by the best equipped museums of this country or Europe, and in the most suitable exhibition cases. In short, it was desired to show the public a museum modeled after the best in this country and Europe, in which, by the limitation of the case, the specimens were all derived from New York State, to show the economic resources of New York, and to instruct objectively all who visited the exhibit.

The work of the State Museum is carried on under six principal heads, paleontology, economic geology and mineralogy, botany, zoology and entomology; the exhibit of the museum would, therefore, naturally have been on these lines, and was so carried out wherever it was possible. In the minds of scientists of this country and of Europe, the name of the New York State Museum has for many years been closely associated with that of Dr. James Hall, the State Geologist. In the preparation of his monumental works on the paleontology of New York, the museum grew, and with its growth was that work of publication which for scientific accuracy, logical arrangement, careful and artistic illustration cannot be equalled in the world. The well-known volumes on paleontology which were exhibited, are in themselves a library of the subject, and the great number of valuable plates which they contain form a comprehensive exhibit of the paleontological specimens in the State Museum. In addition was exhibited the Cohoes mastodon, a unique and almost perfect specimen. At the time the work was placed in charge of the assistant director of the museum, the State Botanist had already begun his work. In the judgment of Professor Peck it was considered desirable to make a selection of some one group, and an exhaustive presentation thereof. He selected the fungi upon which he had for a long time been working, and in relation to which he had made many interesting discoveries of economic value. His

report to the superintendent is under the department of horticulture, page 305. To the farmer and the epicure, the physician and the student, it will be alike interesting and valuable.

Could Dr. Lintner, the State Entomologist, have had the strength to undertake an exhibit in his department, it would have been at once a revelation and a liberal education to the other States, but the pressure of his regular work was so great that he was reluctant to undertake new duties at the expense, perhaps, of those already entered upon, and, therefore, decided to make no entomological exhibit. It was the opinion of more than one foreign judge that no other similar exhibit compared with that of New York in the careful arrangement of specimens, attention to detail and neat methods of display. In no one group was this careful arrangement more evident than in that of the land and fresh water shells prepared by the assistant zoologist, Mr. William B. Marshall. These specimens were almost all owned by the museum, but a few necessary additions were purchased by the State Board of Managers. A series of the mammals of New York State was also exhibited. The report of the assistant zoologist will be found under the department of ethnology, page 503.

## MINERAL EXHIBIT.

The mineral exhibit was the most extensive of the exhibits made by the New York State Museum and consisted of two collections — the scientific collection of minerals in the west gallery and the collection of economic minerals in the mining exhibit on the main floor. The former has accumulated for many years and is of great educational value. It contains moreover many large and particularly fine specimens which cannot be duplicated. Mr. Lea M. Luquer, assistant in mineralogy at Columbia College, was placed in charge of the selection, examination, cataloguing and arrangement of the minerals of the museum which formed this very beautiful exhibit. Mr. Luquer's report is appended, page 319. The mining exhibit was almost entirely collected for the World's Columbian Exposition, and represents as fully as possible the mineral resources of New York State. Although New York does not rank high as a mining State, its mineral products are of great value. The brick industry alone amounts to $8,500,000 a year. The product of its quarries of building stone is enormous, although an accurate statement of its annual value cannot yet be made. The salt industry amounts to over $1,500,000 a year. A large amount of capital is invested in the iron industry of New York, but the present state of the iron market has closed many of the mines. The clay industries of the State, the brick and pottery works, have now become an important source of income to many residents of New York and are the fountain head of much inter-State commerce. Early in his official life in Albany the assistant director of the museum recognized the propriety of a bulletin of reliable information on the subject of the clay industry, and secured the services of Mr. Heinrich Ries, Ph. B., who has visited all the works of the State manufacturing articles from this material, and has prepared a full and very valuable bulletin upon the clays of New York. It is expected this will soon be published. An extract from this

unprinted bulletin forms the appended report by Mr. Heinrich Ries, who made the clay collections for the exhibit at the World's Fair. Mr. Ries was the assistant in charge of the installation of the mining exhibit, and performed his duties in a manner alike creditable to himself and to the State.

The iron ores exhibited by the State were obtained by correspondence and supplemented by specimens from the museum. The superintendent experienced great difficulty in securing satisfactory specimens of salt for display. Mr. R. D. White, C. E., was first sent out to visit the manufacturers of salt in the State and to select and arrange for the shipment of the different kinds of their product. The companies did not feel that the exhibits would be of financial value to them, and were reluctant to involve themselves in any expenditure of time or labor. It became necessary to send Mr. William C. Clarke, E. M., on an additional trip before satisfactory arrangements could be made to present a proper exhibit. The study of the gypsum industry had already been placed in the hands of Mr. Clarke, and his results are published in Bulletin No. 11 of the New York State Museum.

The building stones of the State were chiefly collected by correspondence and were prepared for exhibition in ten-inch cubes, one face receiving as high a polish as the stone was susceptible of, and the other faces being prepared so as to bring out the individual peculiarities of the stone. The work of cutting and polishing these stones was done by the firm of Schilling & Co., of Albany, who also prepared the stones for the geological obelisk. Mr. Seward M. Savage, E. M., made a tour of the Adirondack region to solicit and secure specimens for the building stone collection and the geological obelisk. Mr. William G. Eberhard, E. M., visited the quarries of bluestone and flagstone in order to obtain specimens of the same. It is proper here to express thanks to Prof. William B. Dwight, of Vassar College, for his laborious efforts to secure for the geological obelisk, stones from the Cambrian formations of Washington and Dutchess counties, at a time when the winter weather made it a matter of great difficulty.

Mr. Isaac G. Perry, State Commissioner of Public Buildings, deserves public recognition for his interest and ability in supplying a very handsome design for the New York State Mining Pavilion.

## ECONOMIC AND GEOLOGIC MAP.

Since the preceding administrative report was written, the superintendent of the scientific exhibit has been requested to amplify the report on the economic minerals of New York and to prepare a map to illustrate the distribution of the same. As only a few weeks' time is available for the amplification of the report and the preparation of the map, the writer has considered it best to give the most attention to the map and to outline very briefly in the text what is at present known about the mineral industries of New York, giving references to articles by reliable authorities. With this in view the accompanying map has been compiled. A geological base was necessary to the proper differentiation of the formations which are of economic importance, and the work of preparing this has brought to light serious deficiencies in the knowl-

edge of the geological formations of New York State which have so far been placed on record.

Although New York is the mother State in geological nomenclature and contains a more complete and extensive series of the formations below the carboniferous than any other State, and though the rocks have been studied for more than sixty years by professional geologists and students, our recorded knowledge of geological detail is far from complete. This is especially true of the Pre-cambrian formations which consist of metamorphic and igneous rocks. This is not, however, very remarkable when we consider that accurate methods of rock study and classification have had their greatest development since 1873 when the microscope was successfully applied to the study of rocks. In mapping the Pre-cambrian formations of New York the author is, therefore, unable to give any great amount of detail. In Westchester, Putnam and southern Dutchess counties his personal studies during a number of years, with the assistance of Messrs. E. M. Blake and H. Ries, have enabled him to differentiate the areas of metamorphosed palæozoic limestones and schists from the subjacent gneisses which can be traced northward through Westchester county and are apparently continuous with the stratified beds which rest upon the granitoid gneiss and granite of Putnam county. The small scale of the map makes it impossible to show the full detail of these narrow belts of rock which owe their existence to the folding and erosion which has taken place within that region. Within the Pre-cambrian area of Putnam county, which is generally known as the "Highlands," in addition to the stratified gneisses which contain the beds of magnetite, there are large masses of granite which appear along the axes of the mountain folds, being flanked by the stratified gneisses. The author regards these as metamorphic granites made plastic in the process of mountain making which created the folds in which they occur. No attempt has been made to differentiate these granites in the mapping, nor has any field work been undertaken with this end in view. The southwestern extension of this Pre-cambrian area through Rockland and Orange counties into New Jersey has precisely the same component rocks and structure. Besides the "Highland" Pre-cambrian area just mentioned, there is the greater area of the Adirondack wilderness. This is known to include two principal formations of Pre-cambrian age. First, an area of metamorphic stratified rocks, extending from Lake Champlain to the Black river and from southern Fulton county nearly to the Canadian boundary. Secondly, in the eastern part of the wilderness and touching at two points the shore of Lake Champlain is a mass of basic plutonic rock chiefly composed of hypersthene and labradorite which may be called norite. In the work of the original Natural History Survey of New York, which culminated in the publication of the reports on the four geological districts of the State in 1842 and 1843, this region was investigated by Prof. Ebenezer Emmons. This geologist recognized clearly the striking lithological differences between the massive norite and the stratified gneisses which environed it, but gave no accurate description of their boundaries, doubtless for want of an accurate map of the wilderness. In 1883 a map of Essex county by C. E. Hall was published in the

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annual report of the State Geologist, which gives approximately the boundaries between the norite and the gneisses. In 1892 Prof. J. F. Kemp, of Columbia College, undertook the study of Essex county under the auspices of the State Museum, and the results of his work are embodied in the economic map. While Prof. Kemp's observations have not been carried around the whole periphery of the plutonic mass, they go sufficiently far to show that it occupies but a small part of the Adirondack wilderness and can be included in a circle of about fifty miles diamiter with its center in the vicinity of Keene Valley. Within this plutonic area are the principal peaks of the Adirondack mountain group. The extension of this area into Franklin county as shown on the map is based on the observations of Ebenezer Emmons. The northwestern part of the metamorphic area is believed by Prof. James Hall to contain rocks of Huronian age. The study of this region is now in the hands of Prof. C. H. Smyth, Jr., of Hamilton College, and to him we look for the elucidation of this question. He classifies under the name of Oswegatchie series a group of crystalline limestones and gneisses. The geology of the Adirondack region as given in the map is based upon the original work of Ebenezer Emmons and Lardner Vanuxem with additions by C. E. Hall, J. F. Kemp and T. G. White in Essex county, and by F. J. H. Merrill in Warren and Hamilton counties. In St. Lawrence, Jefferson and Lewis counties Prof. Smyth has given information concerning the distribution of the gneisses and other Pre-cambrian rocks. On the north side of the wilderness Prof. H. P. Cushing, of Adelbert College, Cleveland, Ohio, has been conducting some field work and has revised the lower boundary of the Potsdam in Clinton county.

An examination of the shores of Lake George was made for the Museum in 1891 by Mr. E. M. Blake.

From the base of the palæozoic upward the geological formations of New York were quite accurately studied in the original survey, but the work of mapping the boundaries was not very carefully done, and though at the present time there is much new information in the possession of those who have made special studies of these formations, but little new material has been published, and it has not been possible within the time at the author's disposal to consult those in possession of unpublished material. The author's personal observations on the palæozoic groups have been chiefly confined to the upper and lower Helderberg limestones and the strata immediately adjacent to them, in Greene, Albany and Schoharie counties and at various points to the westward along the principal lines of railway. The principal guide used in the preparation of the geological base was the Agricultural and Geological map of New York, published by authority of the Legislature in 1844. In revising the boundaries given on this map the four geological district reports of New York have been carefully studied, and from them many corrections have been introduced, although the old map was based on the material contained in those reports. This was particularly noticeable in mapping the outcrop of the upper Helderberg limestones, which on the old map is shown far to the northward of Otsego and Schuyler lakes, although Vanuxem reported the occurrence of the corniferous

limestone at Richfield Springs, in the town of Springfield at the head of Otsego lake and at Cherry Valley; a similar error occurs in the mapping of these limestones in Seneca county, where they are shown in a straight belt between Seneca and Cayuga lakes, far to the south of Seneca outlet, although Prof. James Hall reported the occurrence of the upper Helderberg limestone on Seneca outlet west of Waterloo. In the new map the two Helderberg limestones have not been differentiated for three reasons: First, because the scale of the map was too small to permit it; second, because the author had not sufficiently accurate information to enable him to separate them, and, thirdly, because, the map being chiefly economic, it seemed best to represent the two limestones in one belt.

In addition to the text of the reports the following published maps have been incorporated:

Geological maps of Jefferson and Clinton counties, by E. Emmons; a geological map of Ontario county, by J. M. Clarke; a geological map of Yates county, by B. H. Wright; a geological map of Onondaga county, by Geo. Geddes; a sketch map of the Mohawk valley, by James Hall; a geological map of Washington, Rensselaer and Columbia counties, by C. D. Walcott; geological maps of parts of Dutchess and Columbia counties, by J. D. Dana and W. B. Dwight; a geological map of parts of Orange and Ulster counties, by John C. Smock; a map of Richmond county, by N. L. Britton, revised by C. A. Hollick. The work of T. Nelson Dale, in Rensselaer county, has also been used. McFarlane's Geological Railway Guide has been freely consulted. To Prof. James Hall, State Geologist, the thanks of the author are due for information concerning the geology of many localities.

The localities of iron mines are chiefly taken from the published map of Prof. J. C. Smock. The stone quarries are from Prof. Smock's map, with additions by Wm. G. Eberhard, E. M., and Wm. C. Clarke, E. M. The clay localities were mapped by Mr. Heinrich Ries, the oil pools by Messrs. C. A. Ashburner and D. Van Ingen, the salt wells by R. D. White, Jr., C. E., and the gypsum quarries by Wm. C. Clarke, E. M. The other mineral localities were mapped by the author.

In preparing the base various practical difficulties had to be met. Among these were the lack of accurate information concerning the boundaries of the Chemung and Catskill formations in New York, the impossibility of undertaking any new field work, and the lack of sufficient funds to permit of more than fifteen printings in the press work of the map. It has, therefore, been necessary to emphasize the economic character of the map rather than the geologic character, to associate in color rocks of similar economic or lithologic features, and for lack of information and funds for printing to indicate without differentiation the great mass of sandstones, shales and conglomerates included between the base of the Portage and the top of the Catskill.

When the large geological map of New York, now in preparation by the State Geologist, is published and distributed, there will be a definite expression of opinion on the boundaries of these formations, but at present there is no official presentation of the subject.

The map will be found in the pocket of the cover of the book and the legend will explain the various tints and symbols used.

Under the head of the economic minerals of New York may be enumerated iron, stone and slate for building and other purposes, clay for brick, terra cotta, drain pipes, etc., lime and cement, salt, gypsum for fertilizer, petroleum and natural gas, mineral paints, talc used in the manufacture of paper, graphite for crucibles, pencils and other uses, feldspar for pottery, garnet for sand paper, and the seemingly inexhaustible supplies of mineral water from the numerous well-known springs.

In the following pages will be found lists of the specimens exhibited and references to the publications which may be consulted for detailed information on the various materials. Some general facts are given in cases where nothing recent has been printed. The materials are arranged in the order of the official classification as follows:

Group 42.— Systematic collection of minerals.
43.— Petroleum.
44.— Building stones, road metal and the geological obelisk.
45.— Garnet for sand paper.
46.— Graphite, clays, quartz and feldspar.
47.— Lime and cement.
48.— Salt, gypsum and mineral waters.
49.— Iron ores.

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## REPORT ON THE SYSTEMATIC COLLECTION OF MINERALS EXHIBITED BY THE NEW YORK STATE MUSEUM AT THE WORLD'S COLUMBIAN EXPOSITION.

BY LEA M. LUQUER, C. E.

### GROUP 42.

All the minerals exhibited were from localities in New York State, and were selected from specimens in the State Museum, many being taken from the old Beck collection. An effort was made to have as many species as possible from the State represented.

The minerals were arranged in three table cases, ten by five feet, and one wall case, ten by seven feet. A special case was sent out from the museum for the exhibition of a very large and magnificent specimen of green fluorite from McComb. In the table cases the specimens were arranged on black cardboard mounts, each with its printed label, giving name of species, variety and locality. At the head of each species was a large label giving its name, chemical composition and system of crystallization. The classification followed was that used in Dana's "System of Mineralogy" for the silicates, and an economic classification for the ores. The specimens in the wall case were placed on adjustable iron brackets, after the manner of the new natural his-

tory museum in Vienna. Among the large specimens in this case were the immense pyroxene crystals from Chilson Hill, specimens of amphibole, hexagonite, calcite, dolomite, spinel, tourmaline, quartz, celestite, stilpnomelane, mica, iron ores, etc.

The following suites of mineral in the table cases deserve special mention:

The twinned calcite crystals from Rossie, collected by Prof. E. Emmons. These crystals are exceedingly beautiful, and probably the best specimens ever collected from this locality belonging to the State Museum. No unmodified rhombohedra are found in the collection, and simple scalenohedra are not common. All the crystals are twinned, many being of the most complex form. The twins are usually parallel to the basal pinacoid. A peculiar feature of all the crystals is that the faces of the unit rhombohedron and the base are roughened, while the other faces are highly polished:

The brown tourmaline crystals from Newcomb, Essex county. Some of the finest dark brown tourmalines yet found have come from this locality, and occur in crystalline limestone. Many of the crystals are of very large size, and are remarkably fresh in appearance. The general habit of the crystals is short and stout, and no new or even rare faces have been observed. The brown tourmalines from Gouverneur, and the beautiful black tourmalines from Pierrepont, also deserve special mention:

The pyroxene crystals from Chilson Hill, Ticonderoga, the site of the old graphite mine of the American Graphite Company. These pyroxenes are peculiar on account of their size, inclusions and external appearance. Two of the largest crystals ever found in the State, and said to be the largest ever found in the world, were exhibited in the wall case. The largest measures thirty-six inches in circumference, and eighteen inches in length. Both crystals have the prism planes perfectly developed, the basal planes lacking, and are badly decomposed. Calcite, quartz and graphite appear commonly as inclusions. From this locality must also be mentioned the quartz crystals, which have the appearance of being water-worn, or, as denominated by Emmons and others, "fused."

A large suite of Manhattan Island minerals was also exhibited, including the rare species, monazite, xenotime and dumortierite.

The following minerals were also interesting on account of the number and beauty of the specimens: Magnetite crystals from Mineville, spinels from Amity, quartz crystals from Herkimer county and other localities in the State, rutiles from the prison quarry, Sing Sing, fluorites from McComb and harmotomes from Sing Sing.

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## CATALOGUE OF MINERALS IN THE NEW YORK SCIENTIFIC EXHIBIT.

Albite (Beck collection); Middle Granville, Washington county.
Albite (Beck collection); Crown Point ore bed, Essex county.
Albite; Moriah, Essex county.
Albite and Dolomite; Prison quarry, Sing Sing, Westchester county.
Allanite [2]; * Mt. Eve, Orange county.
Amphibole [2]; ———, St. Lawrence county.
Amphibole, Tremolite; Edenville, Orange county.
Amphibole, Tremolite; Sing Sing, Westchester county.
Amphibole, Tremolite; Brewsters (Tilly Foster mine), Putnam county.
Amphibole, Tremolite (Beck collection) [2]; Gouverneur, St. Lawrence county.
Amphibole, Tremolite [4]; Gouverneur, St. Lawrence county.
Amphibole, Tremolite in Calcite; Sing Sing, Westchester county.
Amphibole, Tremolite (Beck collection); Amity, Orange county.
Amphibole, Tremolite (Beck collection); King's Bridge, Westchester county.
Amphibole, Tremolite [2]; Sparta, Westchester county.
Amphibole, Hexagonite [2]; Edwards, St. Lawrence county.
Amphibole, Actiuolite (Beck collection); Kent, Putnam county.
Amphibole, Actinolite (Beck collection); Fishkill, Dutchess county.
Amphibole, Actinolite (Beck collection); Sanford Mine, Essex county.
Amphibole, Actinolite; New York city.
Amphibole, Asbestus (Beck collection); Greenwood Furnace, Orange county.
Amphibole, Asbestus (Beck collection); Patterson (near Rogers farm), Putnam county.
Amphibole, Asbestus (Beck collectiou); Quarantine, Richmond county.
Amphibole, Asbestus; Pawling, Dutchess county.
Amphibole, Asbestus [3]; Staten Island.
Amphibole, Mountain Leather; Unionville, Westchester county.
Amphibole, Edeuite [2]; Edenville, Orange county.
Amphibole, Edenite (Beck collection); Edenville, Orange county.
Amphibole, Edenite (Beck collection); Warwick, Orange county.
Amphibole; Hornblende; East Russell, St. Lawrence county.
Amphibole, Hornblende [3]; Pierrepont, St. Lawrence county.
Amphibole, Hornblende [3] (Beck collection); Edenville, Orange county.
Amphibole, Hornblende; Edenville, Orange county.
Amphibole, Hornblende; Clark's Hill.
Amphibole, Hornblende [2] (Beck collection); Monroe, Orange county.
Amphibole, Hornblende [7]; Monroe, Orange county.
Amphibole, Hornblende (Beck collection); Grass Point, Rockland county.
Amphibole, Hornblende in quartz; ———, St. Lawrence county.
Amphibole, Hornblende [2]; ———, St. Lawrence county.
Amphibole, Hornblende (Beck collection); Amity, Orange county.
Amphibole, Hornblende; DeKalb, St. Lawrence county.
Amphibole, Hornblende (Beck collection); Warwick, Orange county.
Amphibole, Hornblende (Beck collection); Gouverneur, St. Lawrence county.
Amphibole, Hornblende; Edwards, St. Lawrence county.
Amphibole, Pargasite (Beck collection); Rossie, St. Lawrence county.
Amphibole, Hydrous Anthophyllite (Beck collection); New York island.
Amphibole, Hydrous Anthophyllite [2]; New York city.
Anhydrite; Lockport, Niagara county.
Ankerite [2]; Lockport, Niagara county.
Ankerite and Hematite; Antwerp, Jefferson county.
Apatite [3]; Rossie, St. Lawrence county.
Apatite (Beck collection); Rossie, St. Lawrence county.
Apatite (Beck collection); Moriah (2d Hall mine), Essex county.
Apatite (Beck collection); Diana, Lewis county.
Apatite [4]; ——, St. Lawrence county.
Apatite; New York city.
Apatite, Eupyrchroite (Beck collection); Crown Point, Essex county.
Apatite, Eupyrchroite [2]; Crown Point, Essex county.
Apatite; Richville, St. Lawrence county.
Apophyllite; Tilly Foster mine, Putnam county.
Arsenopyrite (Beck collection); Edenville, Orange county.
Barite; Northern New York.
Barite [2]; Whitson's, Westchester county.
Barite (Beck collection); Rossie, St. Lawrence county.

* The numeral attached indicates the number of specimens.

Barite; Richville, St. Lawrence county.
Barite; Gouverneur, St. Lawrence county.
Barite; DeKalb, St. Lawrence county.
Barite; Gouverneur, St. Lawrence county.
Beryl; Monroe, Orange county.
Beryl; Fort George, New York city.
Beryl; New York city.
Biotite; Monroe (Clove mine), Orange county.
Biotite [2]; Edenville, Orange county.
Biotite; Crown Point, Essex county.
Biotite (Beck collection); Monroe, Orange county.
Brookite; Ellenville, Ulster county.
Calcite (Beck collection); Oxbow, Jefferson county.
Calcite; Sing Sing, Westchester county.
Calcite; Oxbow, Jefferson county.
Calcite; Gouverneur, St. Lawrence county.
Calcite (Beck collection); Amity, Orange county.
Calcite; Watertown, Jefferson county.
Calcite; Lockport, Niagara county.
Calcite; Oxbow, Jefferson county.
Calcite; Cornwall, Orange county.
Calcite (Beck collection); Catskill, Greene county.
Calcite; Crescent (Dansbach's quarry), Saratoga county.
Calcite; Middleville, Herkimer county.
Calcite, Quartz and Bitumen; Middleville, Herkimer county.
Calcite; Amity, Orange county.
Calcite and Dolomite [2]; Lockport, Niagara county.
Calcite; Natural Bridge, Jefferson county.
Calcite; Anthony's Nose, Westchester county.
Calcite [2]; New York city.
Calcite [2]; McComb, St. Lawrence county.
Calcite (Beck collection); Camillus, Onondaga county.
Calcite; Sing Sing, Westchester county.
Calcite; Sparta, Westchester county.
Calcite inclosing Galenite; Rossie, St. Lawrence county.
Calcite (Beck collection); Gouverneur, St. Lawrence county.
Calcite [52] (Beck collection); Rossie, St. Lawrence county.
Calcite and Dolomite; Spraker's Basin.
Calcite and Quartz, Middleville, Herkimer county.
Calcite [5]; Rossie, St. Lawrence county.
Calcite [7]; Oxbow, Jefferson county.
Calcite (Simms collection); Howe's Cave, Schoharie county.
Calcite and Celestite [4]; Rossie, St. Lawrence county.
Calcite; ———, St. Lawrence county.
Calcite [2]; Rondout, Ulster county.
Calcite; Tilly Foster mine, Putnam county.
Calcite; Pitcairn, St. Lawrence county.
Calcite; Antwerp, Jefferson county.
Calcite [2]; Lockport, Niagara county.
Calcite (Beck collection); Haverstraw (Tompkins quarry).
Calcite, Dog-tooth spar [6]; Lockport, Niagara county.
Calcite, Stalactite coated with Limote; Mineville, Essex county.
Calcite, Stalactite (Simms collection); Ball's cave, Schoharie county.
Calcite, Stalagmite (Simms collection); Ball's cave, Schoharie county.
Calcite, Stalactite; Howe's Cave, Schoharie county.
Calcite, Stalactite and Stalagmite (Gebhard collection); New York.
Calcite, Stalactite (Simms collection); Ball's cave, Schoharie county.
Calcite, Calc Tufa incrusting moss (from John Skinner); Mohawk, Herkimer county.
Calcite, Calc Tufa (Beck collection); Jamesville, Onondaga county.
Celestite; New York city.
Celestite (Beck collection); Stark, Herkimer county.
Celestite; Lockport, Niagara county.
Celestite (Emmons collection); Rossie, St. Lawrence county.
Celestite [3]; Lockport, Niagara county.
Chabazite; New York city.
Chalcopyrite (Beck collection); Ellenville, Ulster county.
Chalcopyrite in Calcite; Rossie, St. Lawrence county.
Chalcopyrite (Beck collection); Shawangunk mine.
Chalcopyrite and Malachite (Beck collection); Muscalonge Lake, Jefferson county.
Chalcopyrite; Ellenville, Ulster county.
Chalcopyrite and Malachite; Canton, St. Lawrence county.
Chalcopyrite and Quartz; Ellenville, Ulster county.
Chalcopyrite, Quartz and Brookite; Edenville, Orange county.
Chlorite and Menaccanite; New York city.
Chondrodite [7]; Brewsters (Tilly Foster mine), Putnam county.
Chondrodite and Spinel (Beck collection); Amity, Orange county.
Chondrodite (Beck collection); ———, Putnam county.
Chondrodite and Spinel (Beck collection); Edenville, Orange county.
Chondrodite; Brewsters, Putnam county.
Chondrodite [2]; Amity, Orange county.
Chondrodite and Spinel; Amity, Orange county.

Chondrodite [5]; Edenville, Orange county.
Chondrodite [3]; Amity, Orange county.
Chondrodite [2]; Brewsters, Putnam county.
Chondrodite; Schroon, Essex county.
Chromite (Beck collection); Rye, Westchester county.
Chrysoberyl [2] (Beck collection); Greenfield, Saratoga county.
Clinochlore; Amity, Orange county.
Columbite [2]; New York city.
Columbite; Fort George, New York city.
Copper; Canton, St. Lawrence county.
Corundum, Ruby (Beck collection); Warwick, Orange county.
Danburite [4]; Russell, St. Lawrence county.
Dolomite and Calcite, Dog-tooth spar; Little Falls, Herkimer county.
Dolomite (Beck collection); Lockport, Niagara county.
Dolomite (Beck collection); Little Falls, Herkimer county.
Dolomite [2]; Sing Sing, Westchester county.
Dolomite and Calcite, Dog-tooth spar; Lockport, Niagara county.
Dolomite and Calcite; Sing Sing, Westchester county.
Dolomite [5]; Lockport, Niagara county.
Dolomite, Gurhofite (Beck collection); Quarantine, Richmond county.
Dolomite, Gurhofite (Beck collection); Phillipstown, Putnam county.
Dumortierite; New York city.
Epidote [2] (Beck collection); Carmel, Putnam county.
Epidote, Oligoclase and Hornblende; Fort George, New York city.
Epidote [2] (Beck collection); Ticonderoga, Essex county.
Epidote (Beck collection); Harlem, New York city.
Epidote (Beck collection); Monroe, Orange county.
Epidote [3]; New York city.
Feldspar (Beck collection); Warwick, Orange county.
Feldspar, Plagioclase (Beck collection); Warwick, Orange county.
Fluorite (Beck collection); Schoharie, Schoharie county.
Fluorite and Chalcopyrite; Muscalonge Lake, St. Lawrence county.
Fluorite (Beck collection); Manlins, Onondaga county.
Fluorite; Lowville, Lewis county.
Fluorite; Rossie (Victoria mine), St. Lawrence county.
Fluorite; ———, St. Lawrence county.
Fluorite; Muscalonge Lake, Jefferson county.
Galenite [2]; Rossie, St. Lawrence county.
Galenite and Sphalerite (Beck collection); Flat Creek, Montgomery county.
Galenite; Mt. Hope (Empire vein).
Galenite and Calcite (Beck collection); Rossie, St. Lawrence county.
Galenite [3] (Beck collection); Rossie, St. Lawrence county.
Galenite [2] (Beck collection); Wurtsboro, Sullivan county.
Garnet (Beck collection); Yonkers, Westchester county.
Garnet and Hornblende Amphibole [3]; Thurman, Warren county.
Garnet (Beck collection); West Farms, Westchester county.
Garnet (Beck collection); Dover (Stone Church), Dutchess county.
Garnet and Epidote (Beck collection); ———, Essex county.
Garnet; Willsborough, Essex county.
Garnet (Beck collection); Monroe, Orange county.
Garnet (Beck collection); Rogers' Rock, Essex county.
Garnet; ———, St. Lawrence county.
Garnet in Mica Schist; ———, St. Lawrence county.
Garnet, Colophonite; Willsborough, Essex county.
Garnet [4]; New York city.
Garnet; North Creek, Warren county.
Garnet on Orthoclase; New York city.
Garnet; Thurman, Warren county.
Gibbsite (Beck collection); Unionville, Dutchess county.
Graphite; Saratoga, Saratoga county.
Graphite in Primary Limestone; Port Henry, Essex county.
Graphite (Beck collection); Port Henry, Essex county.
Graphite; Johnsburgh, Warren county.
Graphite; Moriah, Essex county.
Graphite (Beck collection); Ticonderoga (Arthur's mine), Essex county.
Graphite (Beck collection); Fishkill, Dutchess county.
Graphite (Beck collection); Rogers' Rock, Essex county.
Graphite; Johnsburgh (A. Noble's farm), Warren county.
Graphite and Calcite; Ticonderoga, Essex county.
Graphite; Ticonderoga, Essex county.
Gypsum (Beck collection); Camillus, Onondaga county.
Gypsum and Dolomite; Lockport, Niagara county.
Gypsum (Beck collection); Stark, Herkimer county.
Gypsum; ———, Onondaga county.
Gypsum (Beck collection); Lockport, Niagara county.
Gypsum and Calcite, Dog-tooth spar; Lockport, Niagara county.

Gypsum, Selenite (Beck collection); Lockport, Niagara county.
Gypsum [water-worn] (Beck collection); ———, Onondaga couuty.
Gypsum (Beck collection); Lenox, Madison county.
Gypsum; Auburn.
Gypsum, Selenite (Beck collection); Syracuse, Onondaga county.
Gypsum, Selenite; ———, Wayne county.
Gypsum, Selenite (Beck collection); ———, Onondaga county.
Gypsum, Selenite; ———. Onondaga county.
Gypsum, Selenite (Beck collection); O'Neil mine, Orange county.
Harmotome [3]; near Sing Sing, Westchester county.
Hematite and Stilpnomelane Chalcodite (J. S. Consley); Sterling mine, Jefferson county.
Hematite (Clark mine); Rossie, St. Lawrence county.
Hematite; DeKalb, St. Lawrence county.
Hematite; Clinton, Oneida county.
Hematite; ———, St. Lawrence county.
Hematite and Quartz; Potsdam, St. Lawrence county.
Hematite, Quartz and Ankerite (Beck collection); Antwerp, Jefferson county.
Hematite, Specular Iron and Magnetite; Arnold vein, Clinton county.
Hematite, Specular Iron [3] (Beck collection); Fowler, St. Lawrence county.
Hematite, Specular Iron; Arnold mine, Essex county.
Hematite, Specular Iron and Jasper (Beck collection); Arnold mine, Essex county.
Hematite, Specular Iron (Beck collection); Edwards, St. Lawrence county.
Hematite, Fossil Ore; Ontario (Jones bed), Wayne county.
Hematite, Martite (Beck collection); Adirondacks.
Hematite, Martite (Beck collection); Monroe (Sterling mine), Orange county.
Heulandite; Whitson's, Westchester county.
Houghite and Serpentine (Beck collection); Somerville, St. Lawrence county.
Indurated Bitumen (Beck collection); S. S. Whitman's sandstone quarry, Herkimer county.
Indurated Bitumen in Calcareous Sandstone (Beck collection); Little Falls, Herkimer county.
Labradorite; Essex county.
Labradorite; Mt. Marcy.
Labradorite [2]; Moriah, Essex county.
Labradorite (Beck collection); Hamptonburg, Orange county.
Labradorite (Beck collection); Newcomb, Essex county.
Labradorite (Beck collection); Lewis Corners, Essex county.
Leucopyrite and Oligoclase; Edenville, Orange county.
Leucopyrite [2] (Beck collection); Edenville, Orange county.
Leucopyrite [2]; Edenville, Orange county.
Lignite; Staten Island.
Limonite; Ancram (Morgan mine), Columbia county.
Limonite [4] (Beck collection); ———. Dutchess county.
Limonite (Beck collection); ———, Jefferson county.
Limonite; Clove Valley (Clove mine), Dutchess county.
Limonite [2]; Sylvan Lake (Fishkill mine), Dutchess county.
Limonite; Mt. Riga mine, Dutchess county.
Limonite; Amenia, Dutchess county.
Limonite; Copake (Copake mine), Columbia county.
Limonite, Bog Ore (Beck collection); Edenville, Orange county.
Limonite, Bog Ore (Beck collection); Gouverneur (Spencer's farm).
Magnetite (Beck collection); Averill ore bed, Essex county.
Magnetite; Mineville (Barton Hill mine), Essex county.
Magnetite (100 feet below surface) (from Gov. Clark) (Beck collection); Clinton Prison, Clinton county.
Magnetite [2] (Beck collection); Essex county.
Magnetite and Hematite Specular Iron; New York.
Magnetite; Palmer Hill (J. & J. Rogers Iron Co.), Clinton county.
Magnetite; Tilly Foster mine, Putnam county.
Magnetite and Epidote; Croft mine, Putnam county.
Magnetite (Beck collection); O'Neil mine, Orange county.
Magnetite [2]; Mineville (Barton Hill), Essex county.
Magnetite; New York city.
Magnetite; Mineville (Mine 21, Port Henry Iron Ore Co.), Essex county.
Magnetite; Newcomb, Essex county.
Magnetite (Nolan shaft); Mineville (Port Henry Iron Ore Co.), Essex county.
Magnetite (Little Joker shaft); Mineville (W., S. & Co.), Essex county.
Magnetite; Moriah, Essex county.
Magnetite and Apatite (Nolan shaft); Mineville (Port Henry Iron Ore Co.), Essex county.
Magnetite and Jenkinsite; O'Neil mine, Orange county.
Magnetite (Little Joker shaft); Mineville (W., S. & Co.), Essex county.

RELIEF MAP STATE OF NEW YORK

Magnetite; Hammondsville, Essex county.
Magnetite (Beck collection); O'Neil mine, Monroe, Orange county.
Magnetite; Hammondsville (Mine No. 4, C. P. Iron Co.), Essex county.
Magnetite; Putnam, Washington county.
Magnetite [2]; Mineville, Essex county.
Magnetite (dendritic markings); Middle Granville, Washington county.
Magnetite showing Slickensides (E. B. Wilson); Sterling, Orange county.
Magnetite, Titaniferous; Russell (Smith farm), St. Lawrence county.
Magnetite, Titaniferous; Newcomb (Lake Sanford), Essex county.
Malachite (Beck collection); Phillipstown, Putnam county.
Malachite; New York city.
Menaccanite (Beck collection); Warwick, Orange county.
Menaccanite [2]; New York city.
Menaccanite and Chondrodite; Warwick, Orange county.
Menaccanite in Quartz (Beck collection); Cornwall, Orange county.
Microcline; Pitcairn.
Microcline [2]; ———, St. Lawrence county.
Millerite, Hematite and Quartz; Antwerp, Jefferson county.
Millerite; Antwerp, Jefferson county.
Molybdenite; New York city.
Monazite; New York city (One Hundred and Fifty-fifth street and Tenth avenue).
Moonstone; Newcomb, Essex county.
Muscovite (Beck collection); Gouverneur, Orange county.
Muscovite (Beck collection); Warwick, Orange county.
Muscovite; Yonkers, Westchester county.
Muscovite; New York city.
Muscovite [5]; New York city.
Muscovite on Quartz; New York city.
Muscovite; Wilson's, Westchester county.
Muscovite (Beck collection); Edenville, Orange county.
Muscovite; Fort George, N. York city.
Muscovite on Dolomite; Sing Sing (prison quarry), Westchester county.
Muscovite; Sing Sing (prison quarry), Westchester county.
Natrolite; Fort Montgomery, Orange county.
Oligoclase; New York city.
Oligoclase, Tourmaline and Quartz; New York city.
Oligoclase; ———. St. Lawrence county.
Orthoclase; Crown Point, Essex county.
Orthoclase (Beck collection); Monroe (Rich iron mine), Orange county.
Orthoclase (Beck collection); Diana, Lewis county.
Orthoclase [2] (Beck collection); Yonkers, Westchester county.
Orthoclase; Sing Sing, Westchester county.
Orthoclase; Ticonderoga (Mt. Hope), Essex county.
Orthoclase [6]; New York city.
Orthoclase (Beck collection); Putnam, Washington county.
Orthoclase (Beck collection); Rogers' Rock, Essex county.
Orthoclase (Beck collection) Alexandria Bay, Jefferson county.
Orthoclase; Hammond (DeLong's Mill), St. Lawrence county.
Oxide of Manganese (Beck collection); Hillsdale, Columbia county.
Oxide of Manganese [2]; ———, Orange county.
Oxide of Manganese; Unionville, Dutchess county.
Peat; Greenfield, Saratoga county.
Pectolite (Beck collection); Piermont, Rockland county.
Phlogopite; Oxbow, Jefferson county.
Phlogopite [2]; Natural Bridge, Jefferson county.
Phlogopite; ———, St. Lawrence county.
Phlogopite; ———, St. Lawrence county.
Phlogopite (Beck collection); Gouverneur, St. Lawrence county.
Phlogopite; Monroe, Orange county.
Phlogopite [2] (Beck collection); Oxbow, Jefferson county.
Phlogopite; Pope's Mill, St. Lawrence county.
Phlogopite: Vrooman's Lake.
Phlogopite (Beck collection); Edwards, St. Lawrence county.
Phlogopite (Beck collection); Somerville, St. Lawrence county.
Phlogopite [2]; Natural Bridge, Jefferson county.
Phlogopite (Beck collection); New Rochelle, Westchester county.
Pinite, Gieseckite; Natural Bridge, Jefferson county.
Pyrite in Dolomite; New York city (King's Bridge ship canal).
Pyrite on Stilbite; New York city.
Pyrite (Beck collection); Diana, Lewis county.
Pyrite (Beck collection); Schoharie, Schoharie county.
Pyrite (Beck collection); New York (Hudson river).
Pyrite; Rossie, St. Lawrence county.
Pyrite (Beck collection); Parish Ore bed.
Pyrite; Albany (Park ave.), Albany county.
Pyrite; Fort George, New York city.
Pyrite [2]; ———, Ulster county.

Pyrite (Beck collection); ———. Ulster county.
Pyrite; Rossie, St. Lawrence county.
Pyrite; Newcomb, Essex county.
Pyrite [2]; Sing Sing, Westchester county.
Pyrite (Beck collection); Martinsburg, Lewis county.
Pyroxene; ———, St. Lawrence county.
Pyroxene; Monroe, Orange county.
Pyroxene; Diana, Lewis county.
Pyroxene; Amity, Orange county.
Pyroxene and Dolomite; Sing Sing, Westchester county.
Pyroxene [4]; ———, St. Lawrence county.
Pyroxene [5]; East Russell, St. Lawrence county.
Pyroxene; ———, Orange county.
Pyroxene; ———, St. Lawrence county.
Pyroxene; Long Pond, Essex county.
Pyroxene; Moriah, Essex county.
Pyroxene (Beck collection); Edenville, Orange county.
Pyroxene [2]; Monroe, Orange county,
Pyroxene [4]; Ticonderoga (Chilson Hill), Essex county.
Pyroxene (Beck collection); Monroe (Greenwood Furnace), Orange county.
Pyroxene; Gouverneur, St. Lawrence county.
Pyroxene (Beck collection); Warwick, Orange county.
Pyroxene, var. Diopside [4]; De Kalb, St. Lawrence county.
Pyroxene, var. Coccolite [2]; Long Pond, Orange county.
Pyroxene, var. Coccolite (Beck collection); Monroe (Two Ponds), Orange county.
Pyroxene, var. Coccolite (Beck collection); Phillipstown, Putnam county.
Pyroxene, var. Coccolite (Beck collection); Greenwood Furnace, Orange county.
Pyroxene, var. Hudsonite (Beck collection); Cornwall, Orange county.
Pyrrhotite and Amphibole, var. Hornblende; Lake Mahopac (Mahopac mine), Putnam county.
Pyrrhotite (Beck collection); Port Henry, Essex county.
Pyrrhotite (Beck collection); Anthony's Nose, Putnam county.
Pyrrhotite in Dolomite; King's Bridge ship canal, New York city.
Quartz (Beck collection); Little Falls, Herkimer county.
Quartz; Little Falls, Herkimer county.
Quartz [2] (Beck collection); Lewis Corners, Essex county.
Quartz; Diamond Island (Lake George).
Quartz; ———, St. Lawrence county.
Quartz [2]; Sing Sing, Westchester county.
Quartz [8]; Middleville, Ulster county.
Quartz; Fowler, St. Lawrence county.
Quartz; Edwards, St. Lawrence county.
Quartz (Beck collection); Diamond Point, Warren county.
Quartz (Beck collection); Lewis, Essex county.
Quartz [2] (Beck collection); Rossie, St. Lawrence county.
Quartz; Fowler, St. Lawrence county.
Quartz [6]; Ellenville, Ulster county.
Quartz and Hematite; Antwerp (Sterling mine), Jefferson county.
Quartz [3]; Middleville, Herkimer county.
Quartz; South Troy, Rensselaer county.
Quartz [4]; ———, Herkimer county.
Quartz (Beck collection); Diana, Lewis county.
Quartz [7]; Ticonderoga (Chilson Hill), Essex county.
Quartz and Hematite, var. Specular Iron; Fowler, St. Lawrence county.
Quartz; Staten Island (Iron mine), Richmond county.
Quartz; Antwerp, Jefferson county.
Quartz on Jasper; Staten Island, Richmond county.
Quartz; Staten Island (Iron mine), Richmond county.
Quartz; Parish Ore bed, St. Lawrence county.
Quartz [7]; ———, St. Lawrence county.
Quartz and Chalcopyrite (Beck collection); Ellenville, Ulster county.
Quartz on Dolomite; Sing Sing, Westchester county.
Quartz [5]; New Baltimore, Greene county.
Quartz; Lansingburgh, Rensselaer county.
Quartz (Beck collection); Warwick, Orange county.
Quartz, var. Rose quartz; Crown Point, Essex county.
Quartz, var. Rose quartz, ———. Westchester county.
Quartz, var. Rose quartz; Port Henry, Essex county.
Quartz, var. Smoky quartz [2]; New York city.
Quartz, var. Smoky quartz; Sing Sing, Westchester county.
Quartz, var. Smoky quartz; Moriah, Essex county.
Quartz, var. Milky quartz; ———, Schuyler county.
Quartz (Beck collection), var. Chrysoprase; Fowler, St. Lawrence county.
Quartz, var. Chalcedony; Lead Mine.
Quartz, var. Agate; Saratoga, Saratoga county.
Quartz, var. Hornstone; Edenville, Ulster county.
Quartz, var. Hornstone (Beck collection); Sprakers, Montgomery county.

Quartz, var. Touchstone; Schoharie, Schoharie county.
Quartz, var. Jasper (Beck collection); Warwick, Orange county.
Ripidolite; New York city.
Ripidolite; Brewsters (Tilly Foster mine), Putnam county.
Rutile in Wernerite; New York city.
Rutile in Dolomite [0]; Sing Sing, Westchester county.
Rutile; Sing Sing, Westchester county.
Serpentine (Beck collection); Rossie, St. Lawrence county.
Serpentine; ——, St. Lawrence county.
Serpentine; O'Neil mine, Orange county.
Serpentine (Simms collection); Staten Island.
Serpentine [2] (Beck collection); Rye, Westchester county.
Serpentine [3] (Beck collection); New Rochelle, Westchester county.
Serpentine (Beck collection); Warwick, Orange county.
Serpentine [2] (Beck collection); Phillipstown, Putnam county.
Serpentine; Edwards, St. Lawrence county.
Serpentine; New York city.
Serpentine; Phillipstown, Putnam county.
Serpentine and Magnetite (Beck collection); Monroe (new mine), Orange county.
Serpentine (Beck collection); Syracuse, Onondaga county.
Serpentine; Oxbow, Jefferson county.
Serpentine; Gouverneur, St. Lawrence county.
Serpentine (Beck collection); Diana, Lewis county.
Serpentine, var. Marmolite (Beck collection); New Rochelle, Westchester county.
Serpentine, var. Marmolite (Beck collection); Rye, Westchester county.
Serpentine, var. Marmolite [3]; Tilly Foster mine, Putnam county.
Serpentine, var. Chrysotile; Phillipstown, Putnam county.
Serpentine, var. Picrolite; Tilly Foster mine, Putnam county.
Serpentine, Serpentine marble; East Moriah, Essex county.
Serpentine, Serpentine marble [2]; Port Henry, Essex county.
Serpentine, Serpentine marble (Beck collection); Amity, Orange county.
Serpentine, Serpentine marble (Beck collection); Pitcairn, St. Lawrence county.
Serpentine, Serpentine marble (Beck collection); Rossie, St. Lawrence county.
Seybertite, var. Clintonite; Warwick, Orange county.
Seybertite, var. Clintonite [4]; Amity, Orange county.
Siderite; Amenia (Amenia mine), Dutchess county.
Siderite [2] (Beck collection); Antwerp, Jefferson county.
Siderite [2]; Burden (Mt. Thomas), Columbia county.
Siderite; Greenport (Plass Hill), Columbia county.
Siderite [2]; Parish mine, St. Lawrence county.
Sillimanite; Yorktown, Westchester county.
Sillimanite; Yorktown, Westchester county.
Sphalerite; Rossie, St. Lawrence county.
Sphalerite, Dolomite and Calcite (Beck collection); Lockport, Niagara county.
Sphalerite [2]; Lockport, Niagara county.
Sphalerite [2] (Beck collection); Wurtsboro, Sullivan county.
Sphalerite in Trenton slate (Beck collection); Spraker's Basin, Montgomery county.
Sphalerite (Beck collection); Ellenville, Ulster county.
Sphalerite; Sing Sing, Westchester county.
Spinel (Beck collection); Monroe, Orange county.
Spinel; ——, Orange county.
Spinel; near Monroe, Orange county.
Spinel in Serpentine; Edenville, Orange county.
Spinel [2]; Monroe, Orange county.
Spinel and Chondrodite (Beck collection); Amity, Orange county.
Spinel [2] (Beck collection); Edenville, Orange county.
Spinel [2] (Beck collection); Amity, Orange county.
Spinel and Amphibole, var. Hornblende; Monroe, Orange county.
Staurolite and Garnet; New York city.
Stilbite [2]; New York city.
Stilbite; Peekskill, Westchester county.
Stilbite in Granite, etc. (Beck collection); New York (Harlem tunnel).
Stilbite (Beck collection); Peekskill, Westchester county.
Stilbite [2]; Whitson's, Westchester county.
Stilpnomelane, var. Chalcodite [2]; (Beck collection); Antwerp, Jefferson county.
Strontianite (Beck collection); Antwerp, Jefferson county.
Strontianite; Schoharie, Schoharie county.
Sulphur in Gypsum (collection of R. B. Howland); Springport, Cayuga county.
Talc; Edwards, St. Lawreuce county.
Talc [2]; Fowler, St. Lawreuce county.
Talc; New York city.

Talc [2] (Beck collection); Peckville, Dutchess county.
Talc (Beck collection); four miles from Quarantine, Richmond county.
Talc and Fluorite; Amity, Orange county.
Talc; Sing Sing (Sparta quarry), Westchester county.
Talc, var. Steatite; Monroe, Orange county.
Talc, var. Rensselaerite (Beck collection); Oxbow, Jefferson county.
Talc, var. Rensselaerite; Oxbow, Jefferson county.
Talc, var. Rensselaerite [4]; Edwards, St. Lawrence county.
Talc, var. Rensselaerite [2]; Fowler, St. Lawrence county.
Titanite [2] (Beck collection); Monroe, Orange county.
Titanite; Rossie, St. Lawrence county.
Titanite and Amphibole, var. Hornblende; New York city.
Titanite (Beck collection); Rogers' Rock, Essex county.
Titanite [3]; Diana, Lewis county.
Tourmaline (Beck collection); Warwick, Orange county.
Tourmaline; High Island, St. Lawrence county.
Tourmaline [8]; New York city.
Tourmaline [3]; Gouverneur, St. Lawrence county.
Tourmaline (Beck collection); Chester, Essex county.
Tourmaline [5]; ———, Essex county.
Tourmaline [5] (Beck collection); De Kalb, St. Lawrence county.
Tourmaline (Beck collection); High Island, St. Lawrence county.
Tourmaline and Quartz; Pierrepont, St. Lawrence county.
Tourmaline; French Mountain, Orange county.
Tourmaline; De Kalb, St. Lawrence county.
Tourmaline [9]; Pierrepont, St. Lawrence county.
Tourmaline [5] (Beck collection); Gouverneur, St. Lawrence county.
Tourmaline; Croton, Westchester county.
Tourmaline [14]; Newcomb, Essex county.
Tourmaline [2]; Minerva, Essex county.
Vesuvianite [2] (Beck collection); Antwerp, Jefferson county.
Vesuvianite; Edenville, Orange county.
Vesuvianite [2] (Beck collection); Amity, Orange county.
Vesuvianite, var. Xanthite [3]; Amity, Orange county.
Warwickite (Beck collection); Warwick, Orange county.
Warwickite [3]; Edenville, Orange county.
Wernerite [4]; ———, St. Lawrence county.
Wernerite; New York city.
Wernerite (Beck collection); Duane, Franklin county.
Wernerite; Keene, Essex county.
Wernerite; Long Pond, Essex county.
Wernerite [2]; Monroe, Orange county.
Wernerite (Beck collection); Gouverneur, St. Lawrence county.
Wernerite [2]; Newcomb, Essex county.
Wernerite [2]; Ticonderoga (Chilson Hill), Essex county.
Wernerite (Beck collection); Schroon, Essex county.
Wernerite (Beck collection); Diana, Lewis county.
Wernerite and Pyroxene (Beck collection); Rossie, St. Lawrence county.
Wernerite and Titanite (Beck collection); No. 14 township, Warren county.
Wernerite; Gouverneur, St. Lawrence county.
Wernerite [2]; ———, St. Lawrence county.
Wernerite and Pyroxene (Beck collection); ———, Lewis county.
Wernerite; Edenville, Orange county.
Wernerite (Beck collection); Monroe, Orange county.
Wernerite (Beck collection); Natural Bridge, Lewis county.
Wollastonite [4]; Diana, Lewis county.
Wollastonite; Natural Bridge, Lewis county.
Wollastonite; Edenville, Orange county.
Xenotime; One Hundred and Fifty-fifth street and Tenth avenue, New York city.
Yttrocerite (S. C. Young); Edenville, Orange county.
Zircon in Magnetite (Beck collection); Cornwall, Orange county.
Zircon (Beck collection); New York city.
Zircon (Beck collection); Cornwall, Orange county.
Zircon (Beck collection); Canterbury, Orange county.
Zircon [2]; ———, St. Lawrence county.
Zircon (Beck collection); Warwick, Orange county.
Zircon (Beck collection); De Long's Mill, St. Lawrence county.
Zircon on Oligoclase; New York city.

PETROLEUM EXHIBIT

# PETROLEUM.

GROUP 43.

The specimens of New York petroleum were collected by Mr. Dudley A. Van Ingen, Ph. B., a graduate of the school of mines of Columbia College. They were exhibited in tall bottles containing two quarts each. As it was not possible, with the time and means afforded, to make an accurate study of the oil regions of New York, nothing was done beyond the collection of the specimens. A brief sketch of the oil region by Mr. Van Ingen is appended.

## PETROLEUM IN NEW YORK STATE.

The oil territory in New York State is a continuation of the Bradford field of Pennsylvania. The counties of Cattaraugus and Allegany contain almost all the developed territory for oil, though Erie county has produced some important gas wells. The first drilling was done at Limestone in Cattaraugus county in 1865, followed by wells at Petrolia and Richburgh in Allegany county in 1881 and 1882 respectively. The oil sand is called the "Richburgh" in Allegany county, and the "Bradford" in Cattaraugus county, but many claim them to be identical. The sandstone is a close, fine-grained rock of a dark brown color. The general direction of the strata runs northeast and southwest dipping to the southwest from three to twenty-five feet to the mile. In the southern part of Allegany county a fourth sand, known as the "Waugh and Porter" is drilled into. This lies some eighty feet below the "Richburgh" sand, and seems to be a different oil sand, although there is much difference of opinion with regard to it.

The oil varies in color from light yellow to almost black, although the dark green oil is by far the most abundant. Its specific gravity at ten degrees C. runs from thirty-eight degrees to forty-five degrees B. Up to date about 8,000 wells have been drilled in the State, and some 6,000 are now producing. They started anywhere from five to 250 barrels per day, but now only average sixty-five-one-hundreths barrels in Cattaraugus county, and sixty-two-one-hundreths barrels in Allegany county. With the oil considerable gas has been found, but now there is little more than enough to supply fuel for pumping. "Edge territory" usually produces good gas wells.

## I. ALLEGANY FIELD.

The Allegany field is in the towns of Greenwood in Steuben county, and Andover, Scio, Alma, Bolivar, Wirt, Clarksville and Genesee in Allegany county. There have been up to December 1, 1892, 5,327 wells drilled, and about 4,600 are now producing. On January 1, 1889, 25,105,000 barrels of oil had been taken out. The greatest daily production was in 1882 when 17,000 barrels marked the limit. At present about 2,500 barrels is the daily production. This field is divided into six pools, viz.: 1. Andover; 2. Alma P. O.; 3. Alma; 4. Bolivar,

Richburgh and Wirt; 5. Waugh and Porter; 6. Clarksville and Niles.

1. *Andover.*— This is situated in Greenwood, Steuben county, and Andover, Allegany county. It was originally drilled for gas to supply the neighboring towns, and all drilling has been done by the Mutual Gas Company of Andover. In all, fifteen wells have been finished since the field was opened in 1889. In depth the wells run from 800 feet in the valley to 1,300 feet on the hills, with oil sand from 15 to 95 feet thick. The field gives a good yield of both gas and oil, the rock pressure being 350 feet on the average and a yield of one to eight barrels of oil per well per day. At present all the wells but three are shut in, as this number is sufficient to furnish the gas needed.

2. *Alma P. O.*— This really belongs to the Alma pool, but as there is a dry streak between them it has been treated by itself. It is very small, covering only five lots in the southwest corner of the town of Alma. The wells are few and run from 800 to 1,500 feet deep, with only 10 to 20 feet of oil sand. The yield of oil and gas is very small.

3. *Alma.*— This pool is a long narrow strip running northeast and southwest and covering about thirty lots in the town of Alma. There are about 250 producing wells, yielding about 125 barrels of oil daily. In depth they run from 1,100 to 1,200 feet, with 15 to 20 feet of producing oil sand. The southwest edge is good gas territory.

4. *Bolivar, Richburgh and Wirt*— This is the oldest and largest part of the Allegany field. It is situated in the towns of Alma, Scio, Bolivar, Wirt, Genesee and Clarksville. The first wells drilled were at Richburgh, in about the center of the field. The wells are deep, ranging from 1,400 to 1,800 feet. The Richburgh sand is from 25 to 50 feet thick. The yield now is only a little more than a half barrel a day, but at first ran as high as 100 barrels a day per well.

5. *Waugh and Porter.*— This pool covers seven lots lying in the southern part of the town of Bolivar. It was opened in 1882, and it was here that the fourth or Waugh and Porter sand was discovered. There are in all thirty-six wells, yielding about forty barrels of oil daily. In depth they run from 1,350 to 1,700 feet. The oil sands, the Richburgh and Waugh and Porter, are 25 and 28 feet thick respectively, separated by some 100 feet of shale and slate. At the outset the yield was about ten barrels a day.

6. *Clarksville and Niles.*— These two pools are only about one-half a mile apart and can almost be considered as one in spite of the dry streak between. The former covers fifteen lots in the towns of Clarksville and Wirt, and the latter six in the northern part of Wirt. Clarksville was first drilled in 1883, and has about 250 producing wells, while Niles dates one year earlier with about 140 wells. The wells are from 1,000 to 1,500 feet deep, and yielded when first shot from five to twenty-five barrels a day, but are now only doing about half a barrel. The oil sand is thicker in Clarksville than in Niles, being five to sixty feet as compared to two to five feet. The gas pressure is light except on the northern edge, where it has been recorded as high as 400 pounds to the square inch.

### II. CATTARAUGUS COUNTY FIELD.

The territory in this county is a continuation of the Bradford field and comprises part of the towns of Carrollton, Allegany and Olean. The first drilling was done at Limestone in 1865, followed soon after by exploration at Rock City, Four Mile and Knapp's Creek. The field may best be considered by dividing it into two, viz.: A. Bradford (proper); B. Allegany town.

*A. Bradford.*— This portion of the field covers about thirty square miles, its greatest length being twelve and one-half miles, and its average breadth being two and one-half miles. There are now some 1,850 producing wells yielding about six-tenths of a barrel each daily. In depth they run from 1,600 to 1,800 feet with 18 to 60 feet of good oil sand, although it often happens that the oil sand is badly broken up by shale and slate.

*B. Allegany Town.*— This field is comparatively new, having been opened about five years ago. It is situated in the town of Allegany along the Allegany river, and is about five miles long by one and one-half wide. There are now about 175 producing wells yielding each about three barrels daily. The oil sand runs about 18 to 25 feet thick, while the wells are 1,000 to 1,200 feet deep. At the start the output ran as high as forty barrels per well. So far no connection has been made with the Bradford, but there is no reason why it will not be made some day should the price of oil go up to allow drilling to pay.

CONTRIBUTORS OF PETROLEUM.

R. Allen, Alma, Allegany county.
Allen & Sternberg, Bolivar.
Andrus & Sons, Bolivar.
Davis & Torrey, Alma.
Mr. Laubenthal, Allegany.
Mr. McDonald, Alma.
I. Miles, Scio.
Mr. Mulken, Richburgh.
Mr. Norton, Scio.
W. J. Penny, Greenwood.
Rufus Scott, Bolivar.
Sherley & Hostetter, Alma.
Mr. Sims, Four Mile.
Union Oil Co., Alma.

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## BUILDING STONES.

GROUP 44.

The State exhibit consisted of ten-inch cubes, dressed on the different faces in various ways, in order to show the possibilities of the stone for commercial purposes. Besides these there were slabs of slate and flagstone. In addition to the exhibit in the mining pavilion a series of four-inch cubes was contributed to the department exhibit in the gallery, where the building stones from all the States in the Union were represented.

The building stones of New York have been carefully studied and described by Prof. John C. Smock, and his results are embodied in Bulletins Nos. 3 and 10 of the New York State Museum. The following report on the bluestone industry, by Mr. Wm. G. Eberhardt, E. M., covers ground not touched upon by Prof. Smock.

The area in which bluestone is quarried in New York State extends from the west shore of the Hudson river, in Ulster and Greene counties, in a southwesterly direction through Ulster, Delaware and Sullivan counties to the Delaware river; and there is a small isolated region in Chenango county, in the towns of Oxford and Norwich.

The region has been opened in the towns of Kingston and Saugerties, Ulster county, and Catskill, Athens and Coxsackie, Greene county, at numerous points from which the stone is carted by the quarrymen to the Hudson, where it is bought by various dealers along the lines of the Ulster and Delaware railroad, the Port Jervis and Monticello railroad, the New York, Ontario and Western railroad, the Erie railroad, and the Delaware and Hudson canal. The last-named district extends through the towns of Mamakating, Sullivan county, and Wawarsing and Marbletown, Ulster county. Very little quarrying is done in the district at present.

Of the quarries whose output is shipped *via* the Hudson river the most important are in the town of Saugerties, Ulster county. The quarries in this township are located at Quarryville, West Saugerties, Highwoods, Bethel and Unionville. This district has been extensively opened and much stone is produced, although here, as also in the Ulster and Delaware district, the business of quarrying has greatly diminished in recent years. The largest quarries in the town of Saugerties are at Quarryville, about four miles west of the Hudson. The quarries here are on ledges of stone, running parallel to the Hudson up into Greene county. Besides a number of small quarries there are two large openings. One of these is abandoned, owing to inadequate pumping facilities. Hand and horse-power pumps were used, and found to be of too small capacity to handle the water. The owners intend putting in steam pumps.

About one-half mile north of the village, on the same ledge, is the other opening, in which four parties are engaged in quarrying, Patrick Kelly, Cornelius Harvey, Z. B. Mower & Co. and A. Carnwright. The total length of the quarry face is about 300 feet. Each quarry employs eight to twelve men, and produces $4,000 to $6,000 in stone per year. No steam machinery is used. Pumps are worked by hand or horse power. The quarries are below the level of the surrounding country, and there is no natural drainage. The water is pumped behind a common dam, extending the length of the workings. The average thickness of the workable bed in these quarries and in the district is about thirteen feet. On this lies a stratum of worthless rock, about three feet thick, which is overlaid by two to twenty feet of earth. The stone is of three grades as to color and hardness. The top layers of the bed are gray and very hard, while those at the bottom are blue and softer. Between these an intermediate grade can be distinguished.

This change in color and hardness occurs in almost all quarries. A bed of bluestone is rarely uniform throughout its entire thickness. Usually the color becomes darker as the distance below the surface and also the distance from the face of the ledge increases. Sometimes, however, the stone is darker in the upper layers. The thickness of

CLAY AND BUILDING STONES EXHIBIT

the several layers also increases with depth and distance from the face of the ledge. Usually the stone in the second block is about twice as heavy as that in the first. The "lifts" or layers of stone in this district vary from three inches to four feet in thickness. The stone taken from the lower lifts does not stand weathering well. It contains seams and "reeds," invisible seams, which open when the stone is exposed to frost. That from the upper lifts is more compact and durable. The stone is carted to Malden, distant five or six miles by road. The rough stone is worth forty-eight to sixty cents per cubic foot, or four to five cents per inch.

A general description can be given of the method of quarrying throughout the bluestone district, which will apply to all quarries, with the exception of a very few where steam machinery is used. The equipment consists of sledge hammers, wedges, plugs and feathers, crowbars, shovels, wheelbarrows, and a hand derrick in most of the larger quarries. Pumps are rarely necessary. The bed is first stripped of the overburden. The "stripping" of "top," as the overburden is called, is usually earth and worthless stone. In the most favorable case it is simply a layer of earth. The worthless rock may be solid, in which case its removal is an expensive item in quarrying, or it may be very much broken up or shaly (called "pencil stuff"), when it is easily removed. The top rock is removed with the aid of blasting powder and dynamite, and large blasts are sometimes fired when it is heavy. Thirty kegs of powder have been fired in one of these blasts. The stripping is done mostly during the winter, and actual quarrying about nine months in the year.

The beds of stone are divided naturally into blocks by seams and joints at right angles to each other. In the direction of the strike of the ledge are the "side seams," which are very marked, and, where large areas are stripped, may sometimes be seen running straight and truly parallel for several hundred feet without interruption. At right angles to the side seams, and less regular than these, are joints which form two opposite sides of a block. The area of blocks varies greatly. That of large ones may be 1,000 square feet or more. The bed being stripped, the layers or "lifts" of good stone are successively raised by means of wedges driven into the natural bedding planes. Large lifts are broken to desired sizes by plugs and feathers. The plugs are driven home at the same time as the wedges and aid in dislodging the stone from its bed. The thickness of lifts varies from one inch to six feet.

In the Highwoods district the quarries are all small, and worked by two or three men. Two men get out about $1,000 to $1,200 in stone per year. These small quarries are worked until the good stone gives out, or more frequently until the top becomes too heavy to be economically handled on so small a scale. The beds of stone in this district are very uncertain. Layers of shaly rock are interstratified with the good bluestone, and pockets of the same material are irregularly distributed through the beds. The district is said by quarrymen to be nearly exhausted. The stone found here is of a good blue color, hard and heavy. All thicknesses are found up to three or four feet. It is sold to dealers at Saugerties and Glasco, seven or eight miles distant.

The cost of cartage is about one dollar and seventy-five cents per 100 square feet two inches thick.

The quarries at West Saugerties, Bethel and Unionville are all small like those in the Highwoods district. The stone is sold to dealers in Malden, Saugerties and Glasco. The stone is also carted to Malden and Saugerties from Palenville, Catskill township, Greene county. This stone is of a greenish tint. From Woodstock, also, stone is carted to Malden. Burhans & Brainard have yards and a mill at Saugerties, and the Ulster Bluestone Company at Malden. Other dealers having yards but no mills are, Sweeney Bros. and James Maxwell, at Saugerties, and W. Porter, at Glasco.

In the town of Kingston there are a few small quarries at Dutch Settlement, Hallihan Hill and Jockey Hill, but very little stone is quarried at these places. It is sold to dealers at Wilbur. The Ulster and Delaware railroad has opened up the bluestone country in the towns of Kingston, Hurley, Olive and Shandaken, Ulster county, but the active quarries in this region are much less numerous than in former years. The largest are near Stony Hollow, in Kingston township, and West Hurley, in Hurley township. Some of the stone from these places is carted to Rondout and Wilbur, and some shipped by rail to Rondout. Farther up the road quarries are small and not numerous. Stone is obtained from all stations along the road as far as Allaben, in Shandaken township. Some of the largest quarries are Grant's, Hewitt Boice's and James O'Neill's, at West Hurley. James O'Neill's quarry is situated about one-half mile south of the village of West Hurley, on a ledge running north and south and dipping slightly west. The bed averages about twelve feet, but is not uniform; about three feet of it is poor stone unevenly distributed through the bed. The stripping varies from five to fifteen feet. The quarry has been opened for about 300 feet, but is worked only on a small scale. The thickness of lifts varies from four to twenty inches. The bottom lifts are of better color than those nearer the top, whose faces are brown probably from the pressure of iron. The stone is shipped by rail to Rondout.

Beside the true bluestone there is a brownish variety quarried at some localities above West Hurley. This is not a handsome stone and not suitable for ornamental purposes.

In the towns of Middletown and Roxbury, Delaware county, a reddish sandstone is found of about the same density and strength as the bluestone of Ulster county. Very little of it is quarried. It is sent to Rondout *via* the Ulster and Delaware railroad. Experiments on bluestone from West Hurley have given the following results: Density, 2.721; crushing strength, 22.45 pounds per square inch. At Rondout Hewitt Boice has extensive stone yards and a mill. Sweeney Bros. and Julius Osterhoudt have yards and mills at Wilbur.

The bluestone territory has been extensively opened in Sullivan county and to a smaller extent in Delaware county and in the town of Deerpark, Orange county. There are quarries along the lines of the Port Jervis and Monticello, Erie, and New York, Ontario and Western railroads in these counties. Along the Port Jervis and Monticello railroad there are quarries at Rose Point, Paradise and Oakland, town of

Deerpark, and at Hartwood and Gilmans, town of Forestburg, Sullivan county. They are all small and their output is sold to dealers in Port Jervis who ship it east, *via* the Erie. Terbell & Ridgeway, who have a stone yard at Port Jervis, handle most of this stone.

In the valley of the Delaware river along the line of the Erie railroad there are quarries in New York State from Deerpark, Orange county, to the town of Sanford, Broome county. In the town of Deerpark there are small quarries at Mill Rift, which sell their output to Louis E. Bliss, New York. At Stairway, Lumberland township, Sullivan county, there are large quarries owned by F. A. Kilgour, which are at present idle, but will be reopened. At Pond Eddy, in the same township, A. H. Woodward operates several quarries and buys the output of others. The quarries on the New York side of the Delaware are not as large or as numerous as those on the Pennsylvania side. The beds of stone here are more uncertain and of a more pockety nature than those of Ulster county, and the stone is harder. All the stone in the Delaware valley from Deerpark to Callicoon, Delaware township, is quite hard. Beyond this point it becomes gradually softer and is more easily worked. Most of the stone on the New York side at Pond Eddy is shipped to Woodward's mills at Newark, N. J., *via* the Delaware and Hudson canal and the Hudson river, although the freight rates by this route are one dollar and sixty-five cents per ton as against one dollar and fifteen cents per ton *via* Erie railroad.

Other places in the town of Lumberland at which bluestone is quarried are in the district opposite Parker's Glen, Penn., and Barryville. At the first named of these places the total output is probably less than $100 per month. The stone quarried is suitable only for flagstone. Prices paid for the stone by dealers are from forty-two to forty-five cents per cubic foot or three and one-half to three and three-fourths cents per inch. Very little stone is quarried at Barryville. That district is nearly exhausted.

In the town of Tusten quarrying is carried on extensively opposite Mast Hope, Penn., and at Tusten. Many small quarries are worked at these places besides a number of larger ones employing ten to fifteen men operated by J. Q. A. Connor & Son, of Mast Hope, and C. W. Martin, of Middletown, N. Y. The stone is quite hard, but not uniformly so, and of several shades of blue; but hardness and color are quite uniform in the same quarry. The thickness of lifts varies from one to eighteen or twenty inches. At Mast Hope a reddish stone is quarried, but only true bluestone is found on the New York side of the river at this point. At Narrowsburg, in the same township, there a number of quarries. Jeremiah Partridge works three quarries at this point. Two of them are within one-fourth of a mile and the third within three-fourths of a mile of the stone docks at Narrowsburg. The stone in all of them is of good blue color and readily worked. The lifts in the farther quarry are heavier and the stone somewhat harder. The owner intends putting in steam drills in this quarry. In Cochecton township there are some small quarries at Cochecton village, but only a few of them are being worked.

In Delaware township there are quarries at Callicoon and at Rock

Run. The quarry of Persbacher Bros. & Co. at Callicoon is about one-half mile northwest of the village. During fifteen months that it has been worked about fifty carloads of fifteen to eighteen tons each have been shipped from it. All this stone has been taken from a single block twenty-five by forty-three feet in area. Five men are at work in this quarry. Most of the material taken out is flagstone, but some ten and twelve-inch lifts have been raised. The stone is of good color, bluer in the top layers than in the bottom, and very hard. The bed has been worked downward twelve feet, below which the depth is unknown. The top is mostly loose earth and varies from two to ten feet in depth.

There are several large quarries at Hankins in the town of Fremont. The largest is operated by Manny & Ross. It is one and one-fourth miles northeast of the village, and employs about twenty men in the active season. A quarry face of 300 to 400 feet in length has been opened, but only a small part of it is worked. The workable bed is twenty to twenty-five feet in thickness. Lifts of all thicknesses up to twenty inches are taken out. The quarry has been worked for eight years and a large quantity of stone is still in sight, but most of it is covered by a very heavy top of rock. The hardness of stone in this locality varies considerably. Louis E. Bliss buys stone at this place.

At Long Eddy and Basket, in the same township, there are extensive workings. Kinney Brothers have a large quarry at Long Eddy, about one-fourth of a mile from the railroad. This quarry has been worked three or four years and has yielded 400 to 500 carloads of stone. The bed is eighteen feet deep, and the ledge on which the quarry is situated runs nearly north and south. The top is quite heavy, being mostly rock twelve to twenty feet deep, but much broken up and easily removed with the aid of powder. Lifts are from one to twelve inches in thickness. The stone is all blue, soft and easily worked. C. W. Martin, F. A. Kilgour and L. E. Bliss get stone from these quarries.

In the town of Hancock, Delaware county, quarrying is carried on very extensively. There are quarries in the Delaware valley at Lordville, Stockport and Hancock, and also on the line of the New York, Ontario and Western railroad. Of the quarries in the Delaware valley, the largest are at Lordville and Stockport. The stone from these places is very well suited for ornamental purposes. It is durable and easily worked. That from Lordville is handled by F. A. Kilgour, Randall & Underwood, and Kirkpatrick Bros. The Stockport stone is claimed to be especially free from "reeds," making it well adapted to stand frost and weathering. It is handled by Kirkpatrick Bros., of Hancock. Farther up the valley there are quarries at Hale's Eddy and Deposit, Tompkins township, Delaware county, and also a few in the town of Sanford, Broome county, along the Erie. At Hale's Eddy all the stone is quarried or bought by O. M. Kingsbury & Son. Randall & Underwood are the most extensive operators at Deposit. The stone from these places is very soft, and of different shades of color from gray to dark blue. Some of the gray stone is very coarse grained.

Along the line of the New York, Ontario and Western railroad there are quarries in Sullivan county in the towns of Liberty and Rock-

MINERAL PAINTS EXHIBIT

land; in Delaware county in the towns of Colchester, Hancock, Tompkins and Walton; and in Chenango county in the towns of Oxford and Norwich. Very little quarrying is done in Liberty township. In Rockland township there are several quarries at Roscoe, the largest of which are worked by Wm. Youmans. Farther up the road there are quarries at Cook's Falls, town of Colchester, and in Hancock township at Trout Brook, East Branch, Fish's Eddy and Hancock Junction. The stone from all these places is of very much the same character as to color and hardness. Geo. S. Harris quarries and buys all the stone at East Branch. The quarries at this place are all small. At Fish's Eddy the quarries are larger. Storie & Hollywood work four quarries at this place.

In the town of Tompkins, Delaware county, there are quarries at Apex and Rock Rift. At the latter place E. C. Inderlied has several quarries and a mill. At Walton, Walton township, several quarries are worked. Thos. Nevins & Son have a quarry and mill on the Delhi division of the Ontario and Western railroad about four miles from Walton Junction. The mill has been removed from Weehawken to Walton, as it is cheaper to ship the stone dressed than in the rough state. The workable bed in the quarry is thirty feet in thickness and is covered by a light top. The F. G. Clarke Bluestone Co. quarries extensively in the town of Oxford, Chenango county. The quarries of this company are located at Oxford, and at Coventry, four miles to the southwest of Oxford on the Delaware, Lackawanna and Western railroad. The stone from both places is dressed at the mill of the company at Oxford. The thickness of the bed in the Oxford quarry is sixteen feet. The top is very heavy, consisting of about forty feet of loose earth and twenty-five feet of solid rock. In order to make a profit under such unfavorable conditions, the quarry is worked on a large scale, and steam machinery is employed in quarrying and handling the stone. A channeling machine is part of the equipment. The stone is handled in the quarry by derricks worked by steam, and is taken out by carts and a wire tramway. The stone is of very fine quality. Its color is a good blue and very uniform throughout the bed. It is softer than Ulster county stone and easily worked, which makes it desirable for ornamental purposes. The lifts are too heavy for small flagstones, but many large ones, measuring fifteen to twenty feet or more on a side, are taken out. Stone up to six feet thick can be obtained at this quarry. Powder is used instead of plugs and feathers in getting out large blocks. Deep holes are drilled with steam drills and reamed out, making a hole about two inches in diameter. A small charge is placed in each hole, which is tamped so that the force of the explosion is exerted against an elastic cushion of air, and the block is thus loosened from its bed without unnecessary splitting. The charges are fired simultaneously by electricity. This method is found more satisfactory than channeling.

Stone is quarried at Norwich for local and foreign consumption. A very dark stone is quarried here, valuable for ornamental purposes.

## CATALOGUE OF BUILDING STONES IN THE NEW YORK SCIENTIFIC EXHIBIT, GROUP 44.

### SANDSTONES.

Baldwin & Hinds, Hindsburg.
Hewitt Boice, Rondout.
A. F. Bouton, Roxbury.
Burhans & Brainard, Saugerties.
F. G. Clarke Bluestone Co., Oxford.
Potsdam Red Sandstone Co., Potsdam.
D. Parmeter, Potsdam.
Albert Dibble, Belvidere.
Mr. Gotts, Medina.
Horan Bros., Medina.
L. W. Hotchkiss, Lewiston.
F. A. Kilgour, Parker's Glen.
G. C. McClune, Ithaca.
Peter Pitkin's Sons, Rochester.
Shear & Co., Schenectady.
J. Osterhoudt, Wilbur.
Ulster Bluestone Co., Malden.
Warsaw Bluestone Co., Warsaw.
B. B. Mason, Keeseville,
J. Nevins & Sons, Walton.
A. D. Symonds, Elmira.

### LIMESTONES.

B. & J. Carpenter, Lockport.
Adams Bros., Chaumont.
J. B. Berridge, Hudson.
Duford & Sons, Chaumont.
P. Callanan, South Bethlehem.
Foery & Kastner, Rochester.
Glens Falls Co., Glens Falls.
Morris & Strobel, Le Roy.
Wm. Reilly, Cobleskill.
A. E. Shaper, Canajoharie.
Eben Thomas, Prospect.
D. C. Hewitt, Amsterdam.
J. Shanahan, Tribes Hill.
S. W. Clarke, Willsborough Pt.
D. R. & H. Fogelsanger, Buffalo.

### MARBLES.

Masterton & Hall, Tuckahoe.
A. L. Pritchard, Pleasantville.
N. Y. State Quarry, Sing Sing.
St. Lawrence Marble Co., Gouverneur.
N. Y. Geol. Surv., Hastings.
Serpentine marble, Thurman.
C. Slade, Saratoga.
Coral shell marble, Beecraft's Mt.
Thomas & Babcock, Waterloo.

### GRANITE.

Thousand Island Granite Co., Montreal, Can.; two cubes.
King Granite Co., Garrison's; one cube also from State Museum.
B. B. Mason, Keeseville.
Mt. Eve Granite Co., Warwick.
F. Larkins, Sing Sing; (in obelisk) one cube from Museum collection.
J. E. Bailey, Cold Spring on Hudson.
Greenfield Quarry.
Luzerne Quarry.
White & Allen, Saratoga.

### DIABASE.

Jas. Bennett, Graniteville, Staten Island.

### ROOFING SLATE.

R. Hall, Whitehall; red slate for roofing and interior decoration.
Ornamental Slate Co., Middle Granville, N. Y.; green and red slate.
Slab of slate from same locality, exhibited by N. Y. State Museum.

### FLAGSTONES.

Persbacher Bros., Callicoon.
Horan Bros.. Medina.

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## NOTE ON THE ROAD METALS OF NEW YORK.

BY HEINRICH RIES.

The rocks used for road metal in New York State are diabase (trap), granite, gneiss, limestone, sandstone, shale and gravel.

Many of the local stone quarries which are scattered over the State sell for road metal the rock obtained in stripping off the upper layers from their quarries. There are a few large quarries which are operated for obtaining road metal alone, and which deserve special mention.

Fort Lee trap quarries. Many tons of material are quarried annually from the Palisades north of Fort Lee. The material, which is exceedingly tough, is either dressed for paving blocks or crushed for

road metal. This material was exhibited because it was identical with the trap of Rockland county.

Farther up the Hudson river the limestone quarries of Tompkins Cove have been in operation for a number of years and supply large quantities of rock for Macadam. It is one of the best materials used. This magnesian limestone is hard and packs easily and makes a good surface, but the cost of maintenance is considerable. The following is an analysis:

| | |
|---|---|
| Lime | 60.20 |
| Alumina | 11.22 |
| Silica | 6.13 |
| Magnesia | 10.45 |
| Carbonic acid | 8.00 |
| Water | 4.00 |
| | 100.00 |

At Iona Island a granite is quarried and broken in a Blake crusher to five or six different sizes for road metal and concrete. The fine residue, or dust, is sold for polishing. Mr. Daniel E. Donovan, of Kingston, N. Y., is the owner.

The Hudson River Stone Supply Co. has an extensive plant for quarrying and crushing granite at Breakneck Mountain, north of Cold Spring. The same company operates a second plant for supplying crushed limestone at Stoneco, north of New Hamburg.

One of the largest quarries in the State is that of P. Callanan at South Bethlehem, Albany county. The lower Helderberg limestone is the rock used and it makes a good road. At Howe's Cave the same limestone is crushed for roadmaking. The Cauda-galli grit of Albany county is used in small quantities locally and makes an excellent road, though not very durable.

At Port Chester, Westchester county, a coarse grained granite is quarried and is considerably used locally, but the best Macadam roads of that district are of limestone from Tompkins Cove.

The gray gneiss has been considerably used as a road material in Westchester county.

On Staten Island the yellow gravel is much used for roadmaking.

The materials used for making roads in the State vary with the locality. If the traffic on the road is moderate it is generally safe to use the local material, whatever its nature, unless it be shale, but if there is a heavy traffic it will pay in most instances to get a stone of superior quality from elsewhere. The requisite qualities of a road metal are hardness and toughness. Where both these qualities are not obtainable in the same stone, the latter is perhaps preferable.

Igneous and siliceous rocks, though often hard, do not consolidate so well or so quickly as limestone, owing to the sandy detritus formed by the first two having no cohesion. The detritus of magnesian limestone acts like a mortar.

The most efficient and economic road metals are diabase and syenite. Granite and gneiss, specially if very micaceous, are apt to disintegrate

rapidly, and produce dust and mud. Shale is to be avoided, as it breaks up rapidly, forming a sticky mud. Gravel, while making a serviceable road, will not pack, and is not durable. If it has to be used some of the difficulty may be overcome by cracking half of the pebbles.

### LIST OF SPECIMENS OF ROAD METALS EXHIBITED.

Trap or Diabase; Fort Lee, N. J.
Granite; Daniel E. Donovan, Iona Island, N. Y.
Granite; Hudson R. Stone Supply Co., Breakneck Mt.
Granite; Port Chester, Westchester Co.
Limestone, Tompkins Cove, N. Y.
Limestone; P. Callanan, South Bethlehem, N. Y.
Sandy Shale (Cauda-galli Grit); Knox, Albany Co.
Yellow Gravel; Staten Island.

### GEOLOGICAL OBELISK.

A prominent feature of the mining exhibit was an obelisk of stone from the various geological formations of New York arranged in layers of proportionate thickness on a scale of fifty feet to the inch, and of which the proportions are those of Cleopatra's Needle in Central Park. The idea of a geological column was first suggested by Prof. Hall, who exhibited a pyramid at the New Orleans Exposition in 1885 and 1886, but it was found advisable by the superintendent to adopt a form and plan different from that of Dr. Hall, and the proportions of the Egyptian obelisk were adopted as exhibiting greater elegance of form and being economical of ground space. The geological obelisk is composed of cut stone from all the solid rock formations occurring in New York in their regular succession from the Archæan to the summit of the Trias. The four sides of the obelisk show by specimens from the various localities the occurrence of the formations in the respective quarters of the State, each formation being represented by a thickness proportionate to its relative thickness in New York, the scale of the shaft being fifty feet to one inch.

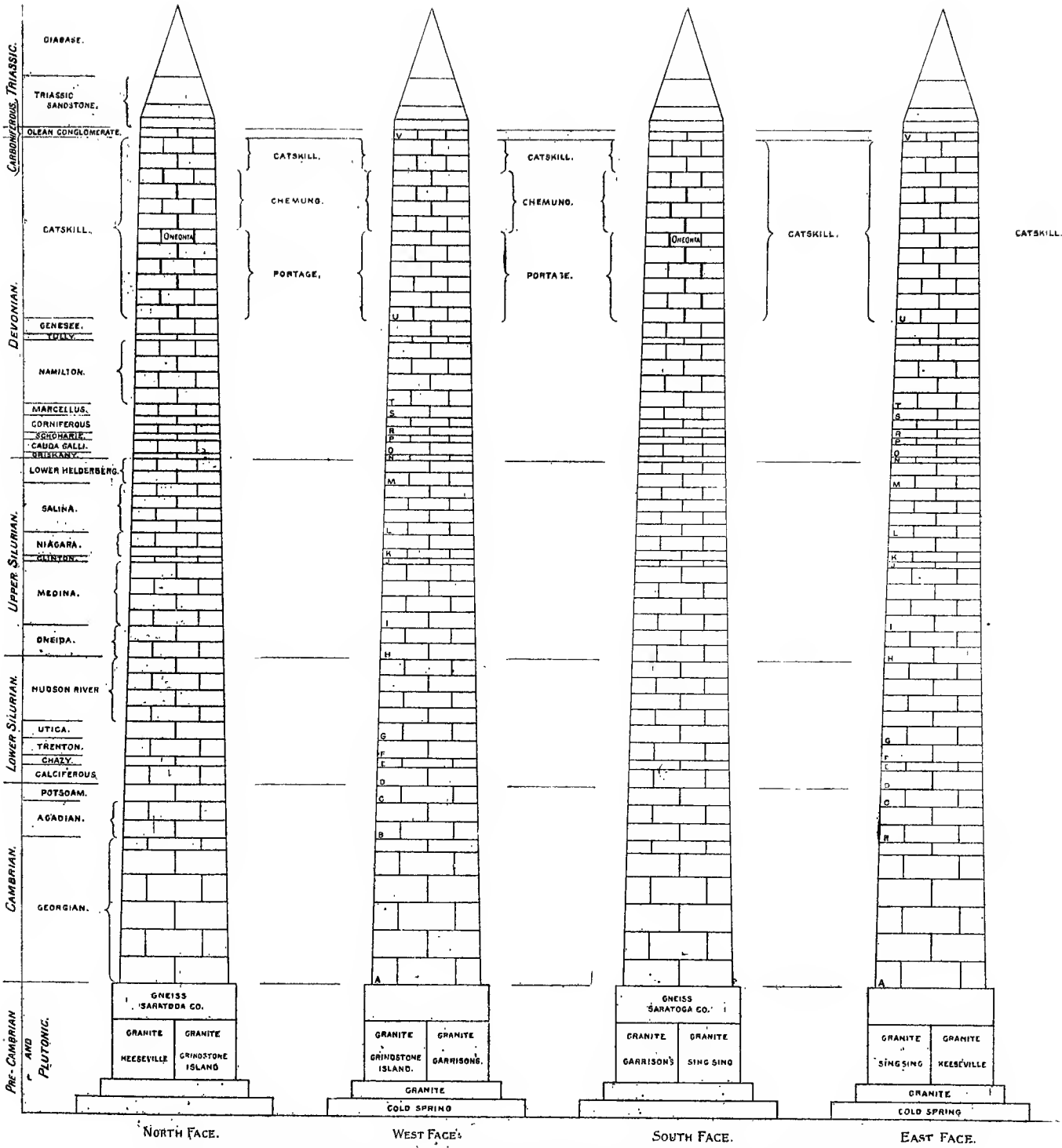
The height of the shaft was twenty-six feet seven inches, and of the pedestal three feet seven inches.

The accompanying cut shows the form of the obelisk as well as the different layers, their names and the relative thickness of the different formations and groups.

The courses are lettered as follows:

| | Number of Courses. | |
|---|---|---|
| Cap and Top Course, Triassic Trap and Sandstone. | | |
| V. Olean Conglomerate (Carboniferous). | 1 | |
| U. Catskill | 12 | Devonian. |
| U. Portage | 5 | Devonian. |
| U. Chemung | 5 | Devonian. |
| T. Genesee | 1 | Devonian. |
| T. Tully | 1 | Devonian. |
| T. Hamilton | 4 | Devonian. |
| S. Marcellus | 1 | Devonian. |
| R. Upper Helderberg, or Corniferous | 2 | |
| P. Schoharie | 1 | |
| O. Cauda galli | 1 | |
| N. Oriskany | 1 | |

| | Number of Courses. | |
|---|---|---|
| M. Lower Helderberg | 2 | Upper Silurian. |
| L. Salina | 4 | Upper Silurian. |
| K. Niagara | 2 | Upper Silurian. |
| J. Clinton | 1 | Upper Silurian. |
| I. Medina | 4 | Upper Silurian. |
| H. Oneida | 1 | Upper Silurian. |
| G. Hudson River | 5 | Lower Silurian. |
| F. Trenton | 1 | Lower Silurian. |
| E. Chazy | 1 | Lower Silurian. |
| D. Calciferous | 1 | Lower Silurian. |
| C. Potsdam | 1 | Cambrian. |
| B. Acadian | 2 | Cambrian. |
| A. Georgia | 6 | Cambrian. |
| Base, Archæan Granites and Gneisses. | | |




# ELEVATIONS OF THE GEOLOGICAL OBELISK ERECTED IN THE NEW YORK STATE MINING EXHIBIT.

SCALE, ¼ INCH = 1 FOOT.

## LIST OF LOCALITIES FROM WHICH STONES WERE OBTAINED FOR THE GEOLOGICAL OBELISK.

Triassic Diabase.— Grand View, Rockland county.

Triassic Sandstone.— Grand View, Rockland county.

Carboniferous Conglomerate. — Olean, Allegany county.

Catskill Sandstone.— Roxbury, Delaware county.

Chemung Sandstone.— Waverly, Tioga county; Elmira, Chemung county; Belvidere, Allegany county; Oleau, Allegany county; Belmont, Allegany county.

Portage Sandstone.— Rock Glen, Wyoming county; Portage, Wyoming county.

Oneonta Sandstone.—Oxford, Chenango county.

Genesee Slate.— South Bristol, Ontario county.

Tully Limestone.— Tully, Onondaga county.

Hamilton Sandstone.— Saugerties, Ulster county; Malden, Ulster county; Kingston, Ulster county.

Marcellus Shale.— Le Roy, Genesee county.

Corniferous Limestone.— Buffalo, Erie county, Le Roy, Genesee county; Cobleskill, Schoharie county.

Schoharie Grit.— Imitated.*

Cauda-galli Grit.— Imitated.*

Oriskany Sandstone.— Oriskany Falls, Oneida county.

Lower Helderberg.— South Bethlehem, Albany county.

Salina Gypsum.— Oakfield, Genesee county.

Salina Salt.— Le Roy, Genesee county.

Salina Shale.— Livonia (imitated),* Livingston county.

Niagara Limestone.— Rochester, Monroe county; Lockport, Niagara county.

Niagara Shale.— Rochester, Monroe county.

Clinton Sandstone.— Clinton, Oneida county.

Clinton Limestone.— Rochester, Monroe county.

Medina Sandstone.— Medina, Orleans county.

Oneida Conglomerate.—Clinton, Oneida county.

Hudson River Sandstone.— Duanesburg, Schenectady county.

Utica Slate.— Fort Plain, Montgomery county.

Trenton Limestone.— Prospect, Oneida county; Lowville, Lewis county; Chaumont, Jefferson county; Glens Falls, Warren county.

Chazy Limestone.— Norwood, St. Lawrence county; Willsboro, Essex county; Whitehall, Washington county.

Calciferous Limestone. — Rochdale, Dutchess county; Canajoharie, Montgomery county; Sandy Hill, Washington county; Saratoga, Saratoga county.

Potsdam Sandstone.— Potsdam, St. Lawrence county; Keeseville, Essex county; Fort Ann, Washington county.

Potsdam Limestone.— Poughkeepsie, Dutchess county.

Acadian Limestone.— Stissing, Dutchess county.

Georgia Slate. — Middle Granville, Washington county.

Georgia Limestone.—Greenwich, Washington county.

Georgia Quartzite.— Stissing, Dutchess county.

### PEDESTAL.

Pre-cambrian Gneiss.— Saratoga, Saratoga county.

Red Granite.— Grindstone Island, Jefferson county; Sing Sing, Westchester county.

Green norite or Labradorite Granite.— Keeseville, Essex county.

Gray Granite.— Garrisons, Putnam county.

### BASE.

Pre-cambrian Granite.— Cold Spring, Putnam county.

### GROUP 45.— GARNET.

The garnet which is mined or quarried in New York State is found in and near the valley of the upper Hudson river, in Warren county on the borders of the Adirondack region. It occurs in a formation of crystalline limestone which appears to form the bedrock of this valley in the vicinity of North Creek and Minerva, and in gneissic rocks which adjoin or are intercolated with the crystalline limestone. It is

* The material which could be obtained was not solid enough to be cut.

found in masses of varying sizes, from that of a pigeon's egg to a diameter of twenty feet. It is classified as massive garnet and shell garnet, the former being impure from the admixture of other minerals, the latter almost entirely pure and the most valuable for commercial purposes. Its chief use is in the manufacture of sandpaper which is used in shoe factories for finishing soles, and is preferred to ordinary quartz sandpaper on account of the ready cleavage of the garnet, which enables it to present as it breaks away new and sharp cutting edges, whereas quartz, which has no cleavage, becomes dulled with friction.

There are two firms working garnet properties in Warren county, H. Behr & Sons and Crehore Brothers of North Creek.

CONTRIBUTORS OF GARNET.

D. Lynch, Minerva; massive garnet. H. Behr & Sons, New York.

GROUP 46.— GRAPHITE.

The only deposits of commercial importance are in the township of Ticonderoga, near the northern extremity of Lake George. These properties are all controlled by the Dixon Crucible Co. of New Jersey.

Formerly large quantities of graphite in masses of considerable size were obtained from a formation of white crystalline limestone not far from the village of Ticonderoga. This locality is said to be exhausted, and is no longer operated by the company. At present a graphitic schist containing a comparatively small percentage of graphite is extensively worked at a locality a few miles west of Rogers' rock.

The graphite of New York is of fine quality and is used in the manufacture of pencils, crucibles and for all the other purposes for which this substance is employed.

CONTRIBUTOR.

Dixon Crucible Co., Ticonderoga. Office, Jersey City, N. J.

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## REPORT ON THE GEOLOGY AND GEOGRAPHY OF THE CLAYS OF NEW YORK EXHIBITED IN THE DEPARTMENT OF MINES AND MINING.

BY HEINRICH RIES, PH. B.

Deposits of clay occur in nearly every county of New York. They belong to three geological periods, viz.: Quaternary, Tertiary and Cretaceous.

Clays of the first period are by far the most common; those of the second period are still somewhat doubtful, but a large number of the Long Island beds may belong here. Of the third period there are undoubted representatives on Long Island and Staten Island.

The clays of the mainland are all Quaternary, so far as is known. The problems of the Quaternary formations in New York are by no means solved, and it is not always possible to decide on the causes leading to the deposition of any particular body of clay by a single visit to the locality. A great number of the deposits are local and basin-shaped, lying in the bottom of the valleys, which are often broad and fertile. They vary in depth from four to twenty or even fifty feet; as a rule they are underlain by drift or by bedrock. The clay is generally of a blue or bluish gray color, the upper few feet being weathered mostly to a red or yellow. Stratification is rare, but streaks of marl are common. In some of the beds small pebbles are found, usually of limestone, and these have to be eliminated by special processes in the manufacture. In many cases the clay is covered by a foot or more of peat. The basin-shaped deposits are no doubt the sites of former ponds or lakes, formed in many instances by the damming up of the valleys, and which have been filled later with sediment of the streams from the retreating ice sheet. The valleys in which these deposits lie are usually broad and shallow. The broad valley of the Genesee river between Mt. Morris and Rochester is an instance. The waters of the river were backed up by the receding glacier for a time, during which the valley was converted into a lake in which a large amount of aluminous sediment was deposited. The material has been employed for common brick.

An idea of the depth of the clay and alluvium in the Genesee valley may be had from the following table. The figures have been taken from records of salt wells:

| | | |
|---|---|---|
| Piffard, Genesee Salt Co., clay and gravel | 64 | feet. |
| York, York Salt Co., clay | 52 | " |
| Piffard, Livingston Salt Co., soil | 158 | " |
| Cuylerville, soil | 154 | " |
| Mt. Morris, Royal Salt Co., soil | 184 | " |

For other localities the following data are given:

| | | |
|---|---|---|
| Aurora, blue clay | 15 | " |
| Wyoming, Pioneer well, soil and clay | 40 | " |

There are a number of the clay deposits which are of sufficient interest geologically, as well as commercially, to be mentioned in some detail. Around Buffalo is an extensive series of flats underlain by red clay. A thin layer of sand overlies the clay, and is of suitable quality for tempering and molding. Similar deposits occur at several localities to the north of the well-known ridge road and around Niagara Falls, Tonawanda and La Salle, to the north of Buffalo, as well as south of the city, along the lake shore.

Prof. Hall mentions deposits of clay at the following localities: At Linden, one mile south of Yates Centre; along the shore of Lake Ontario, east of Lewiston; on Cashaqua creek deposits of tenacious clay occur from the crumbling of tenacious green shales; in Niagara county beds of clay are said to occur in every town, but they often contain considerable quantities of lime.

A bed of blue and red clay is being utilized at New Brighton, near Rochester. The deposit lies near the head of Irondequoit bay, and was deposited by some stream flowing into it.

Clays are also found at several points in the valley of the Oswego river, between Oswego and Syracuse, an important one being at Three Rivers.

At Watertown there is an extensive deposit of clay, some twenty acres in extent, and of a red and gray color. The bed is twenty feet thick and rests on the Trenton limestone. Another extensive bed of clay is being worked at Ogdensburg. It is blue in color, somewhat sandy, and sixty feet thick. A similar deposit occurs at Madrid, in St. Lawrence county.

Turning our attention to the southern portion of the State, we find clays in abundance in all the valleys and lowlands. The extensive marshes near Connewango and Randolph are said to be underlain by clay throughout their entire extent.

At Levant, near Jamestown, is an interesting bed of clay several acres in extent. It is probably of post-glacial age, and the section, as determined by boring, is:

| | |
|---|---|
| Yellow sand | 4 feet. |
| Quicksand | 4 inches. |
| Yellow clay | 6 feet. |
| Blue clay | 70 feet. |
| Hardpan | |

At Breesport, near Elmira, is a bank of blue clay rising from the valley to a height of fifty feet. It was evidently formed when the valley was dammed up, and has subsequently been much eroded, so that a comparatively narrow terrace along the side of the valley is all that remains. A similar deposit is found at Newfield, south of Ithaca.

Deposits of clay, suitable for brick and tile, are common in the lowlands bordering the Mohawk river from Rome to Schenectady. The beds vary in thickness from six to fifteen feet, and the clay is mostly of a red, blue or gray color.

Among the most extensive and important deposits are those of the Hudson river valley. Here are deposits of two types: Estuary deposits of fine sand, yellow and blue stratified clay, and cross-bedded delta deposits, the materials of which are much coarser. The estuary deposits indicate a period of depression and deposition of the clay in quiet water. The clay is mostly blue, but where the underlying sand is wanting, it is weathered to yellow, this latter often extending to a depth of fifteen feet below the surface, and to a still greater depth along the line of cracks down which the water can percolate. The depth of oxidation is influenced by the nature of the clay, and the upper portion weathers easily on account of its sandy nature and loose texture.

Horizontal stratification is present and the layers of clay are separated by extremely thin laminæ of sand. At some localities the layers of the clay are very thin and alternate with equally thin layers of sand.

PERISTYLE AND FRENCH

'ATUE "REPUBLIC"

This condition is found at Haverstraw, Croton, Dutchess Junction, Stony Point, Fishkill, Cornwall, New Windsor, Catskill and Port Ewen. At all the above-mentioned localities, except the last two, the clay is overlain by the delta deposits of streams tributary to the Hudson, and this alternation of layers may be due to the variation of the flow of rivers emptying at that point, the sandy layers being deposited during layers of flood. The delta of Catskill creek has been found at Leeds, some two miles west of the Hudson river, and the delta of Rondout creek, which flows into the Hudson at Port Ewen, will no doubt be found by following the creek back to the old shore line of the estuary.

Isolated ice-scratched bowlders are not uncommonly found in the clay. They were probably dropped by icebergs floating down the estuary to the sea. There is sometimes a sharp distinction between the yellow or weathered and the blue or unweathered portion of the clay.

The line of separation also between the clay and the overlying sand is often very sharp. The blue clay is more plastic than the yellow, but both effervesce readily with acid, owing to the presence of three to six per cent of carbonate of lime, and are, therefore, properly speaking, marly clays.

The clays are underlain by a bed of gravel, till or bedrock. From Catskill northward, the clay is in most instances covered by but a foot or two of soil. South of Catskill the character of the overlying material varies.

The thickness of the clays varies as the following figures will show:

| | | |
|---|---|---|
| Eddyville ..... | Blue clay ..... | 10 feet. |
| Lefever Falls..... | Blue clay ..... | 42 " |
| Dutchess Junction..... | Blue clay ..... | 130 " |
| Rosendale..... | Blue clay ..... | 30 " |
| Roseton ..... | Blue clay ..... | 233 " |
| Haverstraw..... | Blue clay ..... | 150 " |

All the streams tributary to the Hudson have at an early period built extensive deltas, which remain to the present day and form terraces along the sides of the valley, which in many instances, as, for example, at Newburgh and Haverstraw, served as sites for towns and cities.

To briefly mention the origin of these clay deposits: Subsequent to the retreat of the glacier which covered the continent there was a depression of the land, which amounted to 80 feet at New York city and 240 feet at Albany. During this period a great amount of plastic clay was deposited, produced by the glacial attrition of the shales and limestones to the north. The latter, no doubt, give the clay its marly character. The upper portion of the clay is more siliceous, and overlying it, as already stated, is a bed of sand, indicating a change in the nature of the material washed into the estuary. During the period of submergence much of the siliceous matter washed into the estuary was deposited at the mouths of the tributary streams, thus form-

ing deltas. It has been suggested by Dr. F. J. H. Merrill that the change in the estuary deposits was due to an elevation of the land, thus exposing an area around the basin which would afford more siliceous matter.

The clays of the Champlain valley are estuary formations of the same age as the Hudson river clays. They underlie the terraces along the lake, which have been elevated to a height of 300 or more feet above the lake's surface. These terraces may be traced almost continuously from Whitehall, at the head of the lake, to its northern end and beyond, but on account of the extensive erosion that has taken place they are usually narrow, and it is only at sheltered points like Port Kent and Beaufort that they are specially prominent. The section involved is yellowish brown sand, yellowish brown clay and stiff blue clay, the latter being rather calcareous, while the upper clay is somewhat siliceous.

### LONG ISLAND CLAYS.

The clay beds are exposed along the north shore of the island and at several points on the main line of the Long Island railroad. With the exception of four similar deposits on the north shore all the clay beds are rather unique in appearance. The most western clay outcrop on Long Island of which we have any knowledge is on Elm Point. There is here a bed of stoneware clay thirty to forty feet thick and overlain by fifteen to twenty feet of yellow gravel and drift. The clay is of a dark gray color and contains streaks of lignite. The deposit will no doubt prove to be of Cretaceous age.

Another outcrop of clay of high quality is at Glen Cove in Hempstead harbor, and has long been known to be of Cretaceous age. The layers are blue, red, black and yellow and dip north ten to fifteen degrees. Near this locality and on the shore of Mosquito Inlet is an outcrop of pinkish clay, used for fire brick and stoneware. Dipping under it to the east is a bed of alternating layers of clay and quartz pebbles, the latter in layers from four inches to one foot in thickness. Associated with this is a bed of kaolin, but the exact relations of the two deposits are not known. Kaolin also outcrops from under the gravels on the west shore of Hempstead harbor.

On Centre Island in Oyster Bay we find the most western outcrop of a number of clay beds which are very similar; the others are at East Neck, Fresh Pond and Fisher Island. The clay on Centre Island is of two kinds, a lower bluish clay and an upper brown sandy clay. Overlying this latter is a stratified sand used for tempering and molding. White fire clay is also said to occur on Centre Island. At Jones' brickyard on the east shore of Cold Spring harbor is a thick deposit of clay. The lower portion is tough and contains little sand. The upper portion is more sandy and of a brown color. The clay bank is over 100 feet high.

There is a deposit of fire clay and stoneware clay at Little Neck near Northport. It is of yellowish white and blue in color and stratified, the layers being separated by thin sheets of sand. Overlying the clay is a deposit of sandy kaolin. The outcrop is of Cretaceous age. Sev-

eral species of Cretaceous leaves have been found in the clay. At Fresh Pond the clay beds crop out along the shore for a distance of half a mile. They are brownish and red in color, the latter being more sandy. Sand overlies the clay.

One of the most interesting clay banks is that on Fisher's Island. The clay is of a reddish brown color similar to that on Centre Island, and in its original condition was horizontally stratified and overlain by twenty to thirty feet of laminated sand. But the whole deposit has been disturbed by the ice sheet passing over it, and the clay layers have been ground and crumpled. A thick bed of glacial clay occurs at Southold, and near it is a bed of potter's clay.

At West Deer Park is a bank of clay twenty feet in thickness, the upper portion of which is yellow and red, while the lower portion is black and burns to a white color. About four miles west of this locality is another bank thirty to forty feet thick of a yellow and red color. Micaceous sand underlies it. The region around East Williston and Hicksville is underlain by clay which is usually encountered a few feet below the surface.

## STATEN ISLAND CLAYS.

These are chiefly of Cretaceous ages, and outcrop at Kreischerville, Green Ridge and Arrochar. Besides the clays there are several kaolin deposits. These clays are a continuation of the well-known belt which extends across New Jersey. They occur as irregularly shaped masses in the sand, and vary in thickness from ten to sixty feet.

Beds of glacial clay also occur on Staten Island and are used for brickmaking.

## ANALYSIS OF NEW YORK CLAYS.

BY HERMAN VULTE, PH. D.

| LOCALITY. | $SiO_2$ | $Al_2O_3$ | $Fe_2O_3$ | CaO | MgO | Alkalies. | Water and organic matter. | $CO_2$ | $MnO_2$ | $TiO_2$ | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Glens Falls red clay ... | 62.23 | 16.01 | 6.96 | 1.24 | 2.21 | 5.08 | .... | .... | .... | .... | 93.73 |
| Rochester red clay .... | 50.55 | 15.46 | 4 38 | 10.95 | 3.35 | 6.30 | .... | .... | .... | .... | 90.99 |
| Buffalo ..... | 57.36 | 16.20 | 4.55 | 5.34 | 3.90 | 6.98 | .... | .... | .... | .... | 94.33 |
| Hornellsville shale..... | 64.45 | 17 77 | 7.04 | 58 | 1.85 | 4.47 | | | | | |
| Breesport ..... ..... | 52.48 | 16.78 | 6.79 | 6.63 | 3.59 | 7.16 | .... | .... | .... | .... | 93.43 |
| Newfield..... | 51.30 | 12.21 | 3.32 | 11.63 | 4.73 | 4.33 | 1 50 | .... | .... | .... | 89.02 |
| Oakland Valley..... | 37.50 | 54.00 | | 3.50 | | .... | 5.00 | | | | |
| Warwick ..... | 53.00 | 23.0 | 7 2 | 0 7 | 2.60 | 4.10 | 9.70 | .... | .... | 0.5 | 100.9 |
| East Williston..... | 69.73 | 16.42 | 2.58 | 1.66 | 0.69 | 6.27 | .... | .... | .... | .... | 97.35 |
| West Neck brown clay. | 61 01 | 19.23 | 5 43 | 0.96 | 1.88 | 4.60 | .... | .... | .... | ... | 93.11 |
| Southold. ..... | 59.09 | 22.11 | 6.54 | 2.19 | 2 64 | 6.22 | .... | .... | .... | ... | 98.75 |
| Fisher Island..... | 53.77 | 20.49 | 9.23 | 4.22 | 2 04 | 9 60 | .... | .... | .... | .... | 99.35 |
| West Deer Park ..... | 59 83 | 24 45 | Tr. | 0.23 | 0.59 | 8.75 | 4.28 | .... | .... | .... | 98.13 |
| Farmingdale..... | 62 39 | 23.60 | 3.30 | 0.70 | 0.10 | 5 89 | ... | .... | .... | .... | 96.07 |
| Alfred Centre clay .... | 53.20 | 23 25 | 10 90 | 1.01 | 0 62 | 2 70 | 6.39 | .... | 0.52 | 0.91 | 99 91 |
| Angola shale ..... | 65.15 | 15.29 | 6.16 | 3 50 | 1.57 | 5.71 | .... | .... | .... | .... | 97.38 |
| Elm Point ..... | 62.06 | 18 09 | 5.40 | 1 05 | Tr. | 6.11 | .... | .... | .... | .... | 92.71 |
| Glen Cove ..... | 70.45 | 21.74 | 1.72 | 0.24 | 0.30 | 5.00 | .... | .... | .... | .... | 99.45 |
| Little Neck ..... | 62.66 | 18.09 | 0 97 | 0 79 | . . | 2 23 | ... | .... | .... | .... | 84.74 |
| Kreischerville ..... | 64.26 | 24 76 | 0 83 | 0.73 | Tr. | 2.35 | .... | .... | .... | .... | 92 93 |
| Kreischerville kaolin... | 82.51 | 11.57 | 0 63 | 0.29 | 0.78 | 2.66 | .... | .... | .... | .... | 98.44 |

## ANALYSIS OF CLAYS AND SHALES.

| LOCALITY. | $SiO_2$ | $Al_2O_3$ | $Fe_2O_3$ | CaO | MgO | $Na_2O + K_2O$ | Water and organic matter. | $CO_2$ | $MnO_2$ | Total. |
|---|---|---|---|---|---|---|---|---|---|---|
| Croton Landing ..... | 62.30 | 14.66 | 9.2 | 3 98 | 1.05 | | | | | |
| Croton Landing ..... | 57.74 | 26.31 | 4.6 | 2.93 | 1.04 | | | | | |
| Verplank yellow clay .. | 50.92 | 26.87 | 4.9 | 2.52 | 1.56 | | | | | |
| Rondout..... | 57.80 | 22.6 | | 4.85 | 2 07 | 12.68 | | | | |
| Barrytown ..... | 59.81 | 22.00 | | 4.35 | 2.29 | ..... | 8 26 | | | |
| Catskill blue clay..... | 50.6 | 21.00 | 7.35 | 3.75 | .96 | | | | | |
| Coeymans blue clay ... | 51.10 | 17.65 | 6 47 | 7.45 | .87 | | | | | |
| Plattsburgh ..... | 65.14 | 13.38 | 7.65 | 2.18 | 2 36 | 8.51 | | | | |
| Watertown ..... | 64.39 | 14.40 | 5.00 | 3.60 | 1 31 | 4.66 | 6.64 | | | |
| Ogdensburg ..... | 49.20 | 17.47 | 6.23 | 7.86 | 4.87 | 9.82 | .... | .... | .... | 95.45 |
| Warner's calcareous shale . ... . . ..... | 25.40 | 9.46 | 2.24 | 22.81 | 10 39 | .95 | 7.60 | 29.96 | .... | 99.81 |
| Warner's red shale..... | 52.30 | 18 85 | 6 55 | 3.36 | 4.49 | 6.00 | 5.30 | 3.04 | Tr. 0 | 99.88 |
| Warner's blue shale.... | 57.79 | 16 15 | 5.20 | 2.73 | 4 67 | 5.33 | 4.50 | 3.42 | Tr. | 99.79 |
| Warner's clay ..... | 45.35 | 12.19 | 4.41 | 10.99 | 6.38 | 4.40 | 8 90 | 7.24 | ..... | 99.86 |
| Warner's cement clay.. | 45.12 | 13.79 | | 12 91 | 7.21 | | | | | |
| Warner's cement clay.. | 43.19 | 14.62 | | 12.36 | 7.05 | | | | | |
| Warner's cement clay.. | 46.00 | 25.02 | | 7.13 | 3.67 | | | | | |
| Warner's cement clay.. | 41.78 | 16.09 | | 12.40 | 5 83 | | | | | |
| Warner's cement clay.. | 41.70 | 18.24 | | 12 71 | 6.02 | | | | | |
| Warner's cement clay.. | 44.00 | 17.33 | | 11.74 | 6.83 | | | | | |

FISHERIES BUILDING

## LIST OF THE BRICK FACTORIES IN NEW YORK, THEIR CLASS OF PRODUCT, AND THE METHODS OF MANUFACTURE USED BY THEM.

LEGEND—
O Y—Open yard. P Y—Pallet yard. C Y—Covered yard. W C—Wire cut machine. H P—Horse power. C—Common brick.
T D—Tunnel dryers. S K—Scove kiln. Cl—Clamp. F—Front brick. D T—Drain tile. S P—Sewer pipe.
D K—Down draft kiln. S M—Soft mud machine. D M—Dry clay machine. T—Terra cotta. R T—Roofing tile. H B—Hollow brick.

| COUNTY. | Town. | Manufacturer. | Product. | Market. | Kind of machine. | System of drying. | Kind of kilns. | Fuel. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|
| Albany | Coeymans Ldg. | Corwin & Cullough | C | New York. | S M | O Y | S K | Wood. | |
| | | M. J. Sutton & Co | C | New York. | S M | O Y | S K | Wood. | |
| | | J. A. Browser | C | New York. | S M | O Y | S K | Coal | |
| | | H. Slingerland | C | New York. | S M | O Y | S K | Coal | |
| | | S. K. Browser | C | New York. | S M | O Y | S K | Coal | |
| | | Sutton & Suderly | C | New York. | S M | O Y | S K | Coal | |
| | Albany | T. McCarthy | C | Albany | S M | O Y | S K | Wood. | 4 |
| | | M. H. Bender | C, F, D T. | Albany | S M & W C | O Y | S K & D K. | W & C. | 2 |
| | | J. Babcock | C | Albany | S M | O Y | S K | Wood. | 1 1-2 |
| | | E. Smith | C | Albany | S M | O Y | S K | Wood. | 2 |
| | | D. H. Stanwix | C | Albany | S M | O Y | S K | Wood | 1 1-2 |
| | | J. C. Moore | C & F | Albany | S M | O Y | S K | Wood. | 4 |
| | Cohoes | J. Baeby | C V | | S M | O Y | S K | Wood. | |
| Allegany | Alfred | Rock Cut Clay Co | F | | D M | | D K | Coal | |
| | Alfred Center | Celadon Terra Cotta Co | T & R T | All over | Tile machine | Hot rooms | D K | Coal | |
| Broome | Binghamton | Ogden Brick Co | C | Local | S M | T D | S K | Wood. | |
| | | Wells & Brigham | C | Local | S M | P Y | S K | Wood. | |
| Cattaraugus. | Randolph | J. Turner | C | Local | | | | | |
| Cayuga | Auburn | J. Harvey | | | | | | | |
| | Owasco | A. Lester | C & D T | Local | | | | | |
| Chautauqua | Dunkirk | William Hilton | F & C | Local | S M | P Y | S K | Coal | |
| | Jamestown | J. E. McCusker & Son | F, C, D T. H B | Local | S M & W C | P Y | S K & D K | C & W. | |
| | | C. A. Morley | C | Local | S M | P Y | S K | Wood. | |
| Chemung | Horseheads | R. G. Eisenhardt | | | | | S K | Wood. | |
| | Breesport | Empire State Brk. Co | C | Local | S M | T D | S K | Wood. | |
| | | P. M. C. Townsend | C | Local | S M | O Y | S K | Wood. | |
| | | Lacy Bros | C | Local | S M | T D | S K | Wood. | |
| Clinton | Plattsburg | J. Quimet | C | Local | S M | O Y | S K | Wood. | |
| | | C. Vaughn | C | Local | S M | O Y | S K | Wood. | |
| | | Gilliland & Day | C | Local | S M | O Y | S K | Wood. | |
| Columbia | Hudson | J. Fitzgerald's Sons | C | New York | S M | O Y | S K | Wood | 12 A |
| | | Arkison Bros | C | New York | S M | O Y | S K | Wood | |
| | | W. E. Bartlett | C | New York | S M | O Y | S K | Wood. | |

## LIST OF BRICK FACTORIES IN NEW YORK, ETC.— *Continued.*

| COUNTY. | Town. | Manufacturer. | Product. | Market. | Kind of machine. | System of drying. | Kind of kilns. | Fuel. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|
| Columbia | Stockport | Walsh Bros. | C | New York | S M | O Y | S K | Wood. | |
| | Stuyvesant | E. Brousseau | C | New York | S M | O Y | S K | Wood. | |
| Cortland | Homer | Horace Hall | | | | | | | |
| Dutchess | Arlington | Flagler & Allen | C | Local | S M | O Y | S K | Wood. | Horse power. |
| | Amenia | Amenia Brick Co | C | Har. R. R. | S M | O Y | S K | Wood | |
| | Dutchess Junc. | W. D. Budd | C | New York and Conn. | S M | O Y | S K | Wood. | 20 A. land. |
| | | T. Timoney | C | New York | S M | O Y | S K | Wood. | 1,500 ft |
| | | Carman & Denton | C | New York | S M | O Y | S K | Wood. | 700 ft. front. |
| | | L. Van Buren | C | New York | S M | O Y | S K | Wood. | 40 A. land. |
| | | Covert Bros | C | New York | S M | O Y | S K | Wood | 450 ft. front. |
| | | Aldridge Bros. & Co | C | New York | S M | O Y | S K | Wood | 250 ft. front. |
| | | Barnacue & Dow | C | New York | S M | O Y | S K | Wood. | 800 ft. front. |
| | Fishkill | Denning's Pt. Brick Co | C | New York | S M | O Y | S K | Wood. | 18 A. land. |
| | | Harris & Ginley | C | New York | S M | O Y | S K | Wood. | |
| | | W. H. Aldridge | C | New York | S M | O Y | S K | Wood. | 300 ft. front. |
| | | J. P. Sherman | C | New York | S M | O Y | S K | Wood. | 300 ft. front. |
| | | O'Brien, McConnell & Valley | C | New York | S M | O Y | S K | Wood. | 500 ft. front. |
| | | Brockway Brick Co | C | New York | S M | P Y | S K | Wood. | 1,200 ft. front. |
| | | Lahey Bros | C | New York | S M | O Y | S K | Wood. | 650 ft. front. |
| | | Dinan & Butler | C | New York | S M | P Y | S K | Wood | 475 ft. front. |
| | Low Point | J. V. Meade | C | New York | S M | O Y | S K | Wood. | |
| | | C. E. Griggs & Co | C | New York | S M | O Y | S K | Wood. | 100 A. |
| | Storm King | Mosher Bros | C | New York | S M | O Y | S K | Wood. | |
| Erie | Tonawanda | M. Riesterer | C | Vicinity | S M | O Y | C | Coal | |
| | Buffalo | Chas. Berrick & Sons | C | Vicinity | S M | P Y | S K | Coal | |
| | | Brush Bros | C | Vicinity | S M | P Y | S K | Coal | |
| | | H. Dietschler & Son | C | Vicinity | S M | P Y | S K | Coal | |
| | | F. Haake | C | Vicinity | S M | P Y | S K | Coal | |
| | | L. Kirkuover | C | Vicinity | S M | P Y | S K | Coal | |
| | | Schusler & Co | C | Vicinity | S M | P Y | S K | Coal | |
| | | G. W. Schmidt | C | Vicinity | S M | P Y | S K | Coal | |
| | | Adams Brk. & Ter. Cotta Co | C F, D T | Vicinity | S M, D M, W C | P Y | D K & S K | Coal | |
| | Black Rock | Black Rock Sewer Pipe Co | S P | | | | | | |
| | Lancaster | Lancaster Brk. Co | C | Buf. &Vic. | S M | P Y | S K | Wood. | |
| | | Buffalo Star Brk. Co | C | Buf. &Vic. | S M | P Y | S K | Wood. | |
| | Angola | J. Lyth & Sons | S P, H B, D T | N. Y. State | | Drying r's | Cupola kilns | Coal | |
| | Evans | William Bolton | C | Local | S M | O Y | S K | Wood. | |
| | Jewettville | Brush & Smith | F & C | | D M | T D | S K, D K | Coal | |
| Fulton | Gloversville | William Stoutner | F & C | Local | D M | T D | S K | Wood. | |
| | | McDuffie Co | F & C | Local | D M | T D | S K | Wood. | |
| Genesee | E. Bethany | B. F. Peck | D T | Local | W C | | | | |
| Greene | Catskill | A. McClean | C | New York | S M | O Y | S K | Wood | 12 1-2 A. |
| | | Ferier & Golden | C | New York | S M | O Y | S K | Wood. | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Greene | Catskill | Derbyshire Brk. Co | C | New York | S M | O Y & C Y | S K. | Wood. | |
| | Athens | W. Ryder | C | New York | S M | O Y | S K | Wood. | |
| | | J. R. Porter | C | New York | S M | O Y | S K | Wood. | |
| | Coxsackie | F. W. Noble | C | New York | S M | O Y | S K. | Wood. | |
| Herkimer | Herkimer | J. J. Mabbett | | | | | | | |
| | Ilion | S. E. Coe | C | Local | S M | O Y | S K | | |
| Jefferson | Carthage | Wrape & Peck | | | | | | | |
| | Watertown | Watertown Brk. Co | C | Local | S M | P Y | S K | Wood. | |
| Madison | Chittenango | Cent. N. Y. Drain Tile Co | D T. | | | | | | |
| | South Bay | C. Stephens | C | | | | | | |
| Monroe | Rochester | Roch. Brk. & Tile Manuf. Co | C & D T. | Local | S M | O Y | S K | | |
| | | German Br. & Tile Manuf. Co | C | Local | S M | O Y | S K | | |
| | | Roches. Sewer Pipe Works | | | | | | | |
| | Maplewood | Robert Gay | C | Local | | | | | |
| | Clarkson | | | Local | | | | | |
| Montgomery | St. Johnsville | J. Smith | C | Local | S M | O Y | S K | | |
| | Fonda | W. Davenport | C & D T. | Local | S M | O Y | S K | | |
| | Amsterdam | H. C. Grime | | | | | | | |
| Niagara | Lockport | A. Mosell | C | Local | | | | | |
| | Niagara Falls | R. P. Slater | C | Local | | | | | |
| | La Salle | Tompkins & Smith | C | Local | | | | | |
| Oneida | Sangerfield | | C | | | | | | |
| | South Trenton | H. L. Garrett | C | | | | | | |
| | Utica | Calahan & Doyle | | | | | | | |
| | Rome | W. W. Parry | C, F | | S M, W C | | S K | | |
| Onondaga | Syracuse | Onon. Vit. Brk. Co | C, P | New York. | W C | T D | D K | Coal | |
| | | N. Y. Paving Brk. Co. | P | New York. | S M | T D | D K | Coal | |
| | | F. H. Kennedy | C | Syracuse. | S M | O Y | S K | Wood. | |
| | | Preston Bros. | C | Syracuse. | S M | O Y | S K | Wood. | |
| | | T. Nolan | C | Syracuse. | S M | O Y | S K | Wood. | |
| | | C. L. Merrick | C | Syracuse. | S M | O Y | S K | Wood. | |
| | | J. Brophy | C | Syracuse. | S M | O Y | S K | Wood. | |
| | Baldwinsville | Seneca Riv. Brk. Co | F | Syracuse. | D M | | D K | Coal | |
| | Camillus | | | | | | | | |
| Ontario | Canandaigua | Burke & Meade | F | Local | D M | | S K & D K. | Oil | |
| | Allen's Hill | B. G. Abbey | | | | | | | |
| | Geneva | Torrey Park Sand Co | | | | | | | |
| Orange | Cornwall | C. A. & A. P. Hedges | C | N Y C & NY, O & W | S M | O Y | S K | Wood. | |
| | New Windsor | J. A. Whitbeck | C | Newburg | S M | O Y | S K | Wood. | |
| | | E. Lang | C | New York. | S M | O Y | S K | Wood | |
| | | J. T. Moore | C | New York. | S M | O Y | S K | Wood. | |
| | | Q. Davidson's Sons | C | New York. | S M | C Y | S K | Wood. | |
| | | Moore & Lahey | C | New York. | S M | O Y | S K | Wood. | |
| | | D. Carson | C | New York. | S M | C Y | S K | Wood. | |
| | Roseton | J. J. Jover | C | New York. | S M | O Y | S K | Wood. | |
| | | Rose & Co | C | New York. | S M | O Y | S K | Wood. | |
| Orange | Goshen | P. Hayne | C. & D. T. | Vicinity | S M & W C | O Y | S K | Wood. | 2 1-2 |
| | Florida | W. H. Vernon | C | Vicinity | S M & W C | O Y | S K | Wood. | 1 |
| Oswego | Oswego Falls | W. D. Edgarton | C & F | Local | S M | O Y | S K | Wood. | |
| Otsego | Oneonta | Crandall & Marble | | | | | | | |
| | | J. Denton & Son | | | | | | | |

## LIST OF BRICK FACTORIES IN NEW YORK, ETC.— *Continued.*

| COUNTY. | Town. | Manufacturer. | Product. | Market. | Kind of machine. | System of drying. | Kind of kilns. | Fuel. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|
| Queens | Cold Springs | Dr. Jones | C | New York & Staten Island | S M | O Y | S K | Wood. | |
| | | W. Hammond | C | New York & Staten Island | S M | O Y | S K | Wood. | |
| | Oyster Bay | Dunn, Dolan & Co. | C | New York & Staten Island | S M | O Y. | S K | Wood. | |
| | East Williston | W. & J. Post | C | Long Is. and New York | S M | O Y & P Y | S K | Wood. | |
| Rensselaer | Greenbush | Mrs. T. Rigney | C | Albany & New York | S M | O Y | S K | Wood. | |
| | Troy | A. Ferguson | C | Vicinity | S M | O Y | S K | Wood. | |
| | Lansingburgh | T. Morissey | | | | | | | |
| | Hoosick Falls | | | | | | | | |
| Rockland | Haverstraw | H. Cristie | C | New York; few to N. Jersey | S M | O Y | S K | Wood. | |
| | | J. Felter | C | New York | S M | O Y | S K | Wood. | |
| | | P. Lynch | C | New York | S M | O Y | S K | Wood. | |
| | | Shankey, Kelly & Renn | C | New York | S M | O Y | S K | Wood. | |
| | | Denton, Fowler & Son | C | New York | S M | O Y | S K | Wood. | |
| | | Excelsior Brk. Co. | C | New York | S M | C Y | S K | Wood. | |
| | | T. Frederick | C | New York | S M | C Y | S K | Wood. | |
| | | A. Donnelly & Son | C | New York | S M | O Y | S K | Wood | |
| | | F. McGuire & Sons | C | New York | S M | O Y | S K | Wood. | |
| | | Murray & Morrissey | C | New York | S M | O Y | S K | Wood. | |
| | | G. I. Sherwood | C | New York | S M | O Y | S K | Wood. | |
| | | G. Archer | C | New York | S M | O Y | S K | Wood. | |
| | | Snedeker Bros. | C | New York | S M | O Y | S K | Wood. | |
| | | C. D. & G. Archer | C | N Y & N J & New Eng. | S M. | O Y | S K | Wood. | |
| | | B. Allison & Co. | C | New York | S M | O Y | S K | Wood. | |
| | | Allison, Wood, Keenan & Co. | C | New York | S M | O Y | S K | Wood. | |
| | | Wood & Keenan | C | New York | S M | C Y | S K | Wood. | |
| | | Bennett, Rownan & Scott | C | New York | S M | P Y | S K | Wood. | |
| | | Fowler & Washburn | C | New York | S M | O Y | S K | Wood. | |
| | | Diamond Brk. Co. | F & C | New York | S M | Hot air tunnel. | S K | Wood. | |
| | | Kelly & Byrnes | C | New York | S M | O Y | S K | Wood. | |
| | | T. C. McGuire | C | New York | S M | O Y | S K | Wood. | |
| | | M. F. & L. F. Washburn | C | New York | S M | O Y | S K | Wood. | |

PORTAL OF FISHERIES BUILDING

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Rockland | Haverstraw | Carr & Smith | C | New York | S M | O Y | S K | | Wood. |
| | | Morrissey & Co | C | New York | S M | O Y | S K | | Wood. |
| | | P. Brophy | C | New York | S M | O Y | S K | | Wood. |
| | | Dolan, Dunn & Butler | C | New York | S M | P Y | S K | | Wood. |
| | | T. & G. Peck | C | New York | S M | O Y | Cl | | Wood. |
| | | T. Malley | C | New York | S M | O Y | Cl | | Wood. |
| | | P. Goldrick | C | New York | S M | O Y | Cl | | Wood. |
| | | T. & G. Peck & Co | C | New York and New Jersey | S M | | | | |
| | Stony Point | Buckley & Carroll | C | New York | S M | O Y | Cl | | Wood. |
| | | T. Clark | C | New York | S M | O Y | Cl | | Wood. |
| | | J. Brennan | C | New York | S M | O Y | Cl | | Wood. |
| | | P. Ohler | C | New York | S M | O Y | Cl | | Wood. |
| | | D. Fowler, Jr., & Washburn | C | New York | S M | O Y | Cl | | Wood. |
| | | J. Shankey & Son | C | New York | S M | O Y | Cl | | Wood. |
| | | C. A. Marks | C | New York | S M | O Y | Cl | | Wood. |
| | | Riley & Clark | C | New York | S M | O Y | Cl | | Wood. |
| | | Riley & Rose | C | New York | S M | C Y | S K | | Wood. |
| | | Allison, Wood & Allison | C | New York | S M | O Y | S K | | Wood. |
| | Thields | Felter & Mather | C | Paterson and Passaic | S M | O Y | S K | | Wood. |
| St. Lawrence | Ogdensburg | Paige Bros | C | Local | S M | O Y | S K | | Wood. |
| | Madrid | Robert Watson | C | Local | S M | O Y | S K | | Wood. |
| | Raymondville | Coats Bros | C | Local | S M | O Y | S K | | Wood. |
| | Gouverneur | G. R. Thompson | C | Local | S M | O Y | S K | | Wood. |
| Saratoga | Mechanicville | Mechanicville Brk. Co | C | Neighboring towns | S M | P Y | S K | | Wood. |
| | Saratoga | C. L. Williams | C | Neighboring towns | S M | P Y | S K | | Wood. |
| Schenectady | Crescent | Newton Bros | C | Schenectady | S M | O Y | S K | | Wood. |
| | Niskayuna | J. E. Winne | C | Schenectady | S M | O Y | S K | | Wood. |
| Steuben | Hornellsville | Hornellsville Brk. Co | P & C | N.Y. State | W C | O Y | S K | | Wood. |
| | | W. H. Signor | C | Local | W C & S M | Tunnel D. | D K | | Coal. |
| | Corning | Corning Brk. Works | C & T C | Local | S M | O Y | S K | | Wood. |
| | Big Flats | | | | | T D | S K | | Wood. |
| Suffolk | Fisher's Island | Fisher's Island Brk. Co | C | N. Eng | S M | O Y | S K | | Wood. |
| | Greenport | L. I. Brick Co | C | Conn. and Staten Is. | S M | O Y | S K | | Wood |
| | Southold | C. L. Sanford | C | Conn. and Staten Is. | S M | P Y | S K | | Wood. |
| | Fresh Pond | G. Longbottom | C | Conn. and Staten Is. | S M | O Y | S K | | Wood. |
| | | R. Sammis | C | Conn. and Staten Is. | S M | O Y | S K | | Wood. |
| | Wyandance | Wyandance Brk. & Ter. Cotta Co. | F C, H B | Long Is. | S M & W C | Steam D. | Wm.&sim.K | | Wood. Coal. |
| Tioga | Farmingdale | M. Myers | C | Long Is. | S M | P Y | | | |
| | Spencer | W. H. Bostwick | C | Local | S M | P Y | Cl | | Coal. |
| Tompkins | Newfield | T. B. Campbell | F | Local | W C | T D | Cl. & S K | | Coal. |
| Ulster | East Kingston | R. Maine & Co | C | New York | S M | O Y | S K | 5 A. land. | Wood. |

## LIST OF BRICK FACTORIES IN NEW YORK, ETC.— *Continued.*

| COUNTY. | Town. | Manufacturer. | Product. | Market. | Kind of machine. | System of drying. | Kind of kilns. | Fuel. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|
| Ulster..... | East Kingston... | Brigham Bros ..... | C..... | New York | S M..... | O Y ..... | S K..... | Wood. | |
| | | A. S. Staples ..... | C..... | New York | S M..... | O Y ..... | S K ..... | Wood. | |
| | | C. A. Shultz..... | C..... | New York | S M..... | O Y ..... | S K..... | Wood. | |
| | | D. S. Manchester..... | C..... | New York | S M..... | O Y ..... | S K..... | Wood. | |
| | | Streeter & Hendrix ..... | C..... | New York | S M..... | O Y ..... | S K..... | Coal . | |
| | | D. C. Overbaugh ..... | C..... | New York | S M..... | P Y..... | S K..... | Wood. | |
| | | A. Rose & Co..... | C ..... | New York | S M..... | P Y..... | S K..... | Wood. | 12 A. land. |
| | | C. H. Littlefield ..... | C..... | New York | S M..... | O Y ..... | S K... ..... | Wood. | |
| | | W. Hutton ..... | C..... | New York and local | S M..... | O Y ..... | S K..... | Wood. | Started in '91. |
| | | Terry Bros..... | C..... | New York | S M..... | O Y ..... | S K..... | Wood. | |
| | Port Ewen..... | S. D. Coykendall..... | C..... | New York | S M..... | O Y ..... | S K..... | Oil... | |
| | | J. Kline ..... ..... | C..... | New York | S M..... | O Y ..... | S K..... | Coal.. | |
| | New Paltz ..... | | | | | | | | |
| | Glasco..... | U. F. & J. T. Washburn ..... | C..... | New York | S M..... | O Y ..... | S K ..... | Wood. | 60 A. land. |
| | | T. Porter ..... | C..... | New York | S M..... | O Y ..... | S K..... | Wood. | Started in '91. |
| | | F. N. Van Dusen ..... | C..... | New York | S M..... | O Y ..... | S K..... | Coal.. | |
| | | Washburn Bros ..... | C..... | New York and Jersey City. | S M..... | O Y & P Y | S K ..... | Wood. | 150 A. land. |
| | Malden ..... | Cooney & Farrell..... | C..... | New York | S M..... | O Y ..... | S K..... | Wood. | Started in '91. |
| | Smith's Dock... | T. Brousseau ..... | C..... | New York | S M..... | O Y ..... | S K..... | Wood. | |
| Warren..... | Glens Falls ..... | Glens Falls Brk. & Ter. Cotta Co. | C, F & T.. | N. Y. State | S M, D P..... | T D ..... | Cl, C K ..... | Coal.. | |
| Washington.. | Middle Granville | J. H. Pepper ..... | C..... | | | | | | |
| Westchester. | Croton Landing. | Anchor Brick Co ..... | C ..... | New York | S M..... | C Y ..... | Cl ..... | Coal.. | |
| | | Croton Brick Co... ..... | C & F .... | New York | S M..... | P Y & O Y | S K..... | Wood. | |
| | | W. A. Underhill Brick Co ..... | C & F .... | New York | S M..... | C Y .... | Cl ... ..... | C.&W. | |
| | Crugers ..... | W. H. Fisher ..... | C..... | New York | S M..... | O Y..... | S K..... | Wood. | |
| | | C. Carman..... | C..... | New York | S M..... | O Y..... | S K..... | Wood | |
| | Montrose ..... | Lynch & King..... | C..... | New York | S M..... | O Y..... | S K..... | Wood. | |
| | | O. & C. Frost..... | C..... | New York | S M..... | C Y..... | S K..... | Wood. | |
| | | Montrose P. N. Brk. Co..... | C..... | New York | S M..... | P Y..... | S K..... | Wood. | |
| | | C. Hyatt..... | C..... | New York | S M..... | O Y..... | S K..... | Wood. | |
| | | J. Morton ..... | C..... | New York | S M..... | O Y..... | S K ..... | Wood. | |
| | Verplanck ..... | King & Lynch..... | C..... | New York | S M..... | O Y..... | S K..... | Wood. | |
| | | A. Fisher ..... | C..... | New York | S M..... | O Y..... | S K..... | Wood. | |
| | | T. N. Avery ..... | C..... | New York | S M..... | O Y..... | S K..... | Wood. | |
| | | B. J. McGuire ..... | C..... | New York | S M..... ..... | O Y..... | S K..... | Wood. | |
| | | J. Morton..... | C & F..... | New York | S M..... | C Y..... | S K..... | Wood. | |
| | | S. Travers ..... | C..... | New York | S M..... | O Y..... | S K..... | Wood. | |
| | | McConnell & O'Brien..... | C..... | New York | S M..... | O Y..... | S K..... | Wood. | |
| | Peekskill ..... | Cole & Bonner..... | C..... | New York | S M..... | O Y..... | S K..... | Wood. | |
| | | Oldfield Bros ..... | C..... | New York | S M..... | O Y..... | S K..... | Wood | |
| | | Bonner Brick Co..... | C..... | New York | S M..... | O Y..... | S K..... | Wood. | |

## CATALOGUE OF CLAYS IN NEW YORK STATE MINING EXHIBIT.

### BRICK CLAYS.

A Mosell, Lockport; clay.
A. McClean, Catskill; clay and tempering sand.
McCabe Bros., Green Ridge; clay.
Mechanicville Brick Co., Mechanicville; clay.
M. Myers, Farmingdale; clay and sand.
Newton Bros., Crescent; clay.
New York Paving Brick Co., Syracuse; clay and brick.
S. B. Campbell, Newfield; clay and paving brick.
Empire State Brick Co., Breesport; clay.
Dunn, Dolan & Co., Oyster Bay, L. I.; clay.
Excelsior Brick Co., Haverstraw; clay and tempering sand.
Fisher's Island Brick Co.; clay and tempering sand.
Flagler & Allen, Arlington; clay.
H. L. Garret, South Trenton; clay.
W. Hilton; clay and brick.
H. C. Griemes, Amsterdam; clay.
Hornellsville Brick Co.; shale and paving brick.
Dr. Oliver Jones, Cold Spring; clay.
G. Longbottom, Fresh Pond; clay.

### TERRA COTTA CLAY.

Celadon Terra Cotta Co., Alfred Centre; clay and roofing tile.
Glens Falls Terra Cotta Co., Glens Falls; terra cotta.
New York Anderson Pressed Brick Co., Staten Island; terra cotta.
New York Architecture Terra Cotta Co., Long Island City.

### STONEWARE CLAY.

Carpenter Bros., Glen Cove.
Northport Fire Sand Manufacturing Co., Northport.
G. W. Mahan, Great Neck, L. I.
Ogden Brick Co., Binghamton; clay.
Onondaga Vitrified Brick Co., Warners; clay and bricks.
J. Quimet, Plattsburgh; clay.
B. F. Peck, E. Bethany; clay and drain tile.
M. Riesterer, Tonawanda; clay.
Rochester Brick and Tile Co., Rochester; clay.
C. L. Sanford, Southold; clay and brick.
B. Sigler, Clarkson; clay.
William Stoutner, Gloversville; clay.
W. A. U. Brick Co., Croton Landing; clay, sand and front and enameled brick.
F. M. Van Dusen, Glasco; clay and sand.
W. H. Vernon, Florida; clay.
Watertown Pressed Brick Co., Watertown; clay.
Paige Bros., Ogdensburg; clay.
Wyandance Brick and Terra Cotta Co., Wyandance, L. I.; clay, brick and hollow brick.
Robert Watson; clay.
Adams Brick Co., Buffalo; clay.
New York Anderson Pressed Brick Co., Staten Island; clay and brick.
William Bolton, Evans; clay.
W. H. Bostwick, Spencer; clay.
Brush Bros., Buffalo; clay and brick.
Buffalo Star Brick Co., Buffalo; clay.
Brush & Smith, Jewettville; shale, raw and ground, and brick (dry press).
Burke & Mead, Canandaigua; clay and dry press brick.

### FIRE CLAY.

Kreischer Bros., Staten Island; clay and fire brick.

### KAOLIN.

Staten Island Kaolin Co., Staten Island.
Carpenter Bros., Glen Cove.

### SEWER PIPE, HOLLOW BRICK.

P. Hayne, Goshen; clay and sewer pipe.
J. E. Mecusker & Son, Jamestown; clay and hollow brick.
J. Lyth & Sons, Angolia; shale and hollow brick.

### ALBANY SLIP.

New York State Drain Tile Works, Albany; clay, also drain tile.

### QUARTZ PEBBLES.

Carpenter Bros., Glen Cove, L. I.

### FIRE SAND.

Kreischer Bros., Staten Island.
Carpenter Bros., Glen Cove.
Northport Fire Sand Manufacturing Co.

## GLASS SAND.

The two chief sources of this material in New York are at Ellenville, Ulster county, and Durhamville, Oneida county. At the former locality the quarries are operated by the Crystal Sand Manufacturing

Company. The sand is obtained from the Shawangunk grit, which is crushed to exceeding fineness. Much of the product is sent to the glass works at Corning.

Large glass sand deposits of Quaternary age occur at Durhamville, near Oneida lake. They are operated by William Williams. The sand is not as white nor as fine as that from Ellenville and is used for the commoner grades of glassware. Much of it is shipped to Lockport. The sand contains ninety-seven to ninety-seven and five-tenths per cent $SiO_2$.

Specimens were exhibited from the above localities.

### FELDSPAR AND QUARTZ.

Feldspar and quartz are quarried at Bedford, Westchester county, and are used in the manufacture of pottery.

### CONTRIBUTOR OF FELDSPAR AND QUARTZ.

Mr. Kinkel, Bedford.

### MINERAL PAINTS.

The mineral paints of New York State are from comparatively few localities, and are manufactured from rocks of three different formations:

1. From Clinton iron ore.
2. From Cambrian red and green slate.
3. From Chemung shale.

No statistics of production are furnished by the manufacturers.

### CONTRIBUTORS.

Clinton Metallic Paint Co., Clinton.

Robert Hall; paint from red and green ground slate, Whitehall.

Elko Mining and Milling Co., Randolph; green, blue, brown and yellow paint from ground shales.

### FIBROUS TALC.

This material, used extensively in the manufacture of paper, is entirely derived from localities in St. Lawrence county.

### CONTRIBUTOR.

Asbestos Pulp Company, Gouverneur; long and short fibre talc and ground talc.

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## LIMES AND CEMENTS.

### GROUP 47.

This group is of great importance in New York State. Lime is made at innumerable localities on the outcrops of the great limestone formations of New York State. No better idea of the distribution of the lime and cement industry can be given than by saying it is chiefly

TERMINAL BUILDING

located in the vicinity of all branches of the New York Central railroad in the State of New York. This fact is due to the influence of limestone belts in determining the physical geography of the State and consequently of the most available lines for the construction of railroads.

The lime industry is an intermittent one, there being only a few localities where the business of making lime is followed throughout the year. Of these, Sing Sing and Pleasantville in Westchester county, Howe's Cave and Glens Falls are perhaps the most important from the commercial standpoint. At innumerable localities, however, lime kilns are operated intermittently to supply the local demand. The principal manufactures of hydraulic cement are those of Rosendale near Kingston on the Hudson. The industry at this locality is very large and the product is of world-wide reputation. At Howe's Cave an hydraulic cement of excellent quality is manufactured. The manufacture of Portland cement, which is essentially a combination of carbonate of lime and clay, is an industry of some importance in New York State. One of the principal manufactories is at Warners, Onondaga county.

### CONTRIBUTORS OF LIMES AND CEMENTS.

Cornell Lime Co., Pleasantville; crude and burned lime.

Mrs. M. R. Anthony, Union Springs; lime.

Rosendale Cement Co., Rosendale; cement, rock, crude, burned and powdered.

Lawrence Cement Co., Rosendale; same as above.

N. Y. & Newark Cement Co., Rosendale; same as preceding.

Buffalo Cement Co.; hydraulic limestone, crude and burnt.

Mrs. Mary Richardson Anthony, Union Springs; hydraulic limestone.

Empire Portland Cement Co., Warners; marl, clay and cement.

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## SALT AND GYPSUM.

GROUP 48.

A detailed description of the salt and gypsum deposits of New York is given in bulletin of New York State Museum, No. 11, by Frederick J. H. Merrill. The following specimens were exhibited:

### ROCK SALT.

Retsof Salt Co., Retsof; different grades of salt mined.

Lehigh Salt Mining Co.; same as above.

### BRINE SALT.

Atlantic Salt Co., Warsaw.
Duncan Salt Co., Silver Springs.
Empire Salt Co., Warsaw.
Genesee Salt Co., Piffard.
Guinlock & Humphrey, Warsaw.
Hawley Salt Co., Warsaw.
Kerr Salt Co., Rock Glen.
Leroy Salt Co., Leroy.
Onondaga Coarse Salt Association, Syracuse.
Pearl Creek Salt Co., Pearl Creek.
Perry Salt Co., Perry.
Royal Salt Co., Mt. Morris.
Warsaw Salt Co., Warsaw.
York Salt Co., York.

### GYPSUM.

Cayuga Plaster Co., Union Springs.
J. W. Garbutt, Garbuttsville.
W. C. Hurd, Fayetteville.

Also, gypsum from Mumford, Caledonia and Port Gibson, but the names of the contributors were not on the specimens.

The mineral waters of New York State are so well known as to require no comment, but an entire case was devoted to samples from the various springs and wells, representing an industry of considerable financial value.

Adirondack Mineral Springs (H. V. Knight), Whitehall, Washington county.
Avon Sulphur Springs (O. D. Phelps), Avon, Livingston county.
Artesian Lithia Spring (C. O. McCreedy), Ballston Spa, Saratoga county.
Cairo White Sulphur Spring (H. K. Lyon), Cairo, Greene county.
Cayuga Mineral Spring (Lucius Baldwin), Cayuga, Cayuga county.
Chittenango White Sulphur Springs (W. H. Young), Chittenango, Madison county.
Chlorine Springs (J. L. Grover), Syracuse, Onondaga county.
Clifton Springs (Dr. Henry Foster), Clifton Springs, Ontario county.
Dansville Springs (J. Arthur Jackson, Secretary and Manager), Dansville, Livingston county.
Deep Rock Spring (Deep Rock Spring Co.). Oswego, Oswego county.
Massena Springs (Sheddon & Stearns), Massena, St. Lawrence county.
Nunda Mineral Springs (Daniel Price), Nunda, Livingston county.
Reid's Mineral Spring (J. R. McNeil), South Argyle, Washington county.
Richfield Springs (T. R. Proctor), Richfield Springs, Otsego county.
Champion Spring (J. Z. Formel), Saratoga Springs, Saratoga county.
Empire Spring (H. W. Hayes, Manager), Saratoga Springs, Saratoga county.
Excelsior Spring (F. W. Lawrence), Saratoga Springs, Saratoga county.
Geyser Springs (Geyser Spring Co.), Saratoga Springs, Saratoga county.
Hathorn Spring (Hathorn Spring Co.), Saratoga Springs, Saratoga county.
Old Red Spring (E. H. Peters, Superintendent), Saratoga Springs, Saratoga county.
Vichy Springs (L. A. James, Superintendent), Saratoga Springs, Saratoga county.
Sharon Springs (John H. Gardner & Son), Sharon Springs, Schoharie county.
Slaterville Magnetic Springs (W. J. Carns & Son), Slaterville, Tompkins county.
Verona Mineral Springs (A. A. Hunt, M. D.), Verona, Oneida county.
Victor Spring (H. J. Dickinson, Buffalo), Darien Centre, Genesee county.
White Sulphur Springs (T. C. Luther), Ballston Spa, Saratoga county.

## IRON ORES.

GROUP 49.

The iron ores of New York are fully described in Bulletin No. 7 of the New York State Museum, by Prof. J. C. Smock. In this report full statistical information is given concerning these ores up to the date of publication. The following is a catalogue of the exhibit:

### MAGNETITE.

Chateaugay Ore and Iron Co., Chateaugay; crude ore and concentrate.
Magnetic Iron Ore Co.; crude ore, concentrates and tailings.
Port Henry Iron Ore Co.; crude ore.
Witherbee, Sherman & Co.; crude ore.
Tilly Foster Iron Mine; crude ore.

### HEMATITE.

Clinton Iron Ore Co., Clinton; crude ore.
Furnaceville Iron Co., Ontario; crude ore.

### LIMONITE.

A. E. Tower & Bro., Poughkeepsie; crude ore.
Ancram Iron Ore Co., Ancram; crude ore.

### SIDERITE.

Hudson River Ore and Iron Co. (Burden); crude and roasted ore.

# INDIVIDUAL EXHIBITS.

## GROUP 42.

Crum, A. B., Middleville; crystals, carbon and liquid inclusions, etc.

Egleston, Prof., New York; minerals and materials used in mines.

English, Geo. L., & Co., New York; mineral specimens, gems and precious stones.

Kunz, Geo. F., New York; cabinet of meteorites, mineral collections.

New York Mineralogical Club, New York; minerals and rocks from New York island.

New York State; mineral specimens.

Tiffany & Co., New York; *a.* collection of minerals systematically arranged; *b.* collection cut and uncut gems and precious stones.

Ward's Natural Science Establishment, Rochester; *a.* collection of minerals; *b.* cabinet of meteorites; *c.* rocks and petrology; *d.* cabinet of marbles.

## GROUP 43.

Standard Oil Co., New York; petroleum products of every kind; products of paraffine wax.

## GROUP 44.

Pritchard, Robert D., Middle Granville; red slate.

## GROUP 45.

Behr, Herman, & Co., New York; flint emery paper and cloth, pumice, etc.

## GROUP 46.

Johns, H. W., Mfg. Co., New York; general collection of asbestos.

## GROUP 47.

Warren Chemical and Mfg. Co., New York; asphalt.

## GROUP 48.

Battelle & Renwick, New York; saltpetre, refined brimstone, etc.

Roessler & Hasslacher Chemical Co., New York; chemicals for mining industries.

Saratoga Lithia Spring Co., Saratoga; mineral water.

White, T. & S. C., New York; refined sulphur, virgin rock and flower.

## GROUP 49.

Chrome Steel Works, Brooklyn; chrome steel castings, welded chrome steel and iron.

Lancaster, James H., New York; direct process steel.

Lipe, Chas. E., Syracuse; samples of welding bronze and iron.

Worthington, H. R., New York; hydraulic pressure pump.

## GROUP 51.

Copper Queen Consolidated Mining Co., New York; *a.* copper ores; *b.* treatment of copper by wet method; *c.* copper ingots.

## GROUP 53.

Emmens Metal Co., New York; metallic nickel, nickel salts and alloys.

## GROUP 54.

Kunz, Geo. F., New York; platinum earth, concentrates, coins and photography.

Tiffany & Co., New York; all alloys of gold and silver; methods of saving gold in gold and silver smithing.

Union Electric Co., New York; lubricating metal.

GROUP 55.

Mechanical Gold Extractor Co., New York; Crawford gold extracting mills.

GROUP 57.

Tiffany & Co., New York; saving and reclaiming gold from floor dust, water, etc.

GROUP 58.

General Electric Co., New York; channeling machine.

Ingersoll-Sergeant Drill Co., New York; drills, channelers, gadders, quarry bars, etc.

Rand Drill Co., New York; quarry bars.

GROUP 60.

General Electric Co., New York; method of lighting mines, electric blowers, fans and air compressers.

GROUP 61.

General Electric Co., New York; electric drills and coal cutters.

Ingersoll-Sergeant Drill Co., New York; air compressers, drills, tripods and columns, coal cutters, quarry bars and blasting batteries.

Lancaster, Jas. H., New York; grapples or ore diggers.

Rand Drill Co., New York; air compressors and power drills.

Suydam, John, Albany; metal flexible joint.

Worthington, Henry H., New York; water supply pump for diamond drill.

GROUP 62.

General Electric Co., New York; electric pumps.

Gould Mfg. Co., Seneca Falls; deep mine pump.

Lancaster, Jas. H., New York; air compressers.

Worthington, H. R., New York; mine pumps.

GROUP 63.

General Electric Co., New York; electric locomotive.

Lancaster, Jas. H., New York; hoisting machine.

GROUP 64.

Chrome Steel Works, Brooklyn; crushed plates, roll shells, shoes and dies.

Lancaster, Jas. H., New York; *a.* rock breaker and ore crusher; *b.* combined crusher, rolls and screen; *c.* ore and rock granulators.

GROUP 67.

Barber Asphalt Paving Co., New York; photographs of pavements, etc.

Bisbee, Williams & Co., New York; model of furnace.

Brumelkamp, P. J., Syracuse; pictures of the salt reservation.

Egleston, T., New York; blowpipe reactions.

Kunz, Geo. F., New York; collection of framed portraits of mineralogists, metallurgists, etc.

Lancaster, Jas. H., New York; models of iron ore, deoxidizers and melting furnaces for making steel.

Ward, Henry A., Rochester; relief maps.

Wendt, Asturo F., New York; photographs of metallurgical works.

## EXHIBITS CLASSED IN OTHER DEPARTMENTS, BUT INSTALLED IN DEPARTMENT E.

DEPARTMENT D.— GROUP 40.

Kunz, Geo. F., New York; wampum made from New Jersey shells.

DEPARTMENT M.

Kunz, Geo. F., New York; busts, portraits and medals of famous mineralogists, metallurgists, etc.

MACHINERY BUILDING

# CATALOGUE OF NEW YORK EXHIBITS IN DEPARTMENT F, MACHINERY.

GROUP 69.

Abendroth & Root Mfg. Co., New York; boilers.

American Fire Engine Co., Seneca Falls; boilers, etc.

American Leather Link Belt Co., New York; leather link belting.

Babcock & Wilcox Co., New York; boilers.

Babcock & Wilcox Co., New York; model of water tube, etc.

Ball & Wood Co., New York; boilers, etc.

Blake, George F., Mfg. Co., New York; condensers.

Buffalo Steam Pump Co., Buffalo; pumps, etc.

Cameron Steam Pump Works, New York; pumps.

Carlson, Conrad, Brooklyn; hod elevating system.

Clonbrook Steam Boiler Works, Brooklyn; boilers.

Consolidated Safety Valve Co., New York; valves.

Conover Mfg. Co., New York; jet condenser, etc.

Davidson, M. T., Brooklyn; pumps.

Dejonge, E., New York; boiler compound.

De La Vergne Refrigerating Machine Co., New York; refrigerating and ice machinery.

Eddy Valve Co., Waterford; fire hydrants and valves.

Electric Pipe Bending Co., Harrison; pipe coils.

Fasoldt, E. C., Albany; air compressors.

Floyd, James R., & Son, New York; slide valve.

Fuel Economizer Co., Matteawan; flue heaters.

General Electric Co., New York; transmission of power.

Gould Mfg. Co., Seneca Falls; pumps.

Hoffeld, R., & Co., Buffalo; leather belting.

Hunt, C. W., & Co., New York; steam engines.

Ingersoll-Sergeant Drill Co., New York; air compressors.

Knowles Steam Pump Works, New York; pumping machinery.

Lake Erie Engineering Works, Buffalo; engines.

Lidgerwood Mfg. Co., New York; electric mining hoist.

Matthews, John, Apparatus Co., New York; soda water machinery.

McIntosh, Seymour & Co., Auburn; compound condensing engines.

Morris Machine Works, Baldwinsville; stuff pump.

National Meter Co., Buffalo; gas engines.

New York Belting and Packing Co., New York; belting, etc.

New York Oil Cabinet Co., New York; oil cabinets.

New York Safety Steam Power Co., New York; automatic cut-off engines.

Payne, B. W., & Sons, Elmira; steam engine.

Rand Drill Co., New York; air compressors.

Rider Engine Co., Walden; engines.

Shock, Gustave, New York; beer machinery, etc.

Simplex Mfg. Co., Esopus-on-Hudson; boilers.

Snow Steam Pump Co., Buffalo; pumps.

Thompson, Bushnell Co., New York; flue cleaners.

Turner Machine Co., New York; motors, pumps, etc.

Watertown Steam Engine Co., Watertown; engines.

Westinghouse, Church, Kerr & Co., New York; engines.

Wheeler Condenser and Engineering Co., New York; condensers.

Wing, L. J., & Co., New York; disc fans.

Wittemann Bros., New York; bottles, etc.

Worthington, Henry R., New York; pumps and pumping machinery.

Yawman & Erbe, Rochester; bottle washing apparatus.

GROUP 70.

American Fire Engine Co., Seneca Falls; fire engines, hose carts, etc.

Waterbury Rubber Co., New York; armored hose.

Worthington, Henry R., New York; fire pumping engines.

GROUP 71.

Bliss, E. W., & Co., Brooklyn; metal working machines.
Capital Machine Tool Co., Auburn; vises.
General Electric Co., New York; turning device.
Gleason Tool Co., Rochester; engine lathes.
Keystone Mfg. Co., Buffalo; wrenches.
Manning, Maxwell & Moore, New York; machine tools.
Morrill Bros., Brooklyn; drop hammer.
Niagara Stamping and Tool Co., Buffalo; tools, etc.
Saunders, D., Sons, Yonkers; pipe cutting machinery.
Stiles & Parker Press Co., Brooklyn; wheel presses and drop hammer.
Westcott Chuck Co., Oneida, lathe chucks.
Williams, J. H., & Co., Brooklyn; drop forgings.
Worthington, Henry R., New York; pump.

GROUP 72.

Baker & Shevlin, Saratoga Springs; bellows bottom screen.
Barton Mfg. Co., New York, rubber stamp machinery.
Booth Bros., Rochester; turning and cording machines.
Lightning Beader Co., Springville; beading machines.
Manning, John J., New York; paper winding rolls.
Singer Mfg. Co., New York; sewing machines.
Tracy, Harriet R., New York; sewing machine.

GROUP 73.

American Wood Decorating Machine Co., New York; wood embossing machine.
Doig, Wm. S., Brooklyn; box nailing machine.
Holmes, E. & B., Buffalo; wood working machinery.
Prybil, Paul, New York; saws, planers, etc.

GROUP 74.

American Box Machine Co., Amsterdam; cutting and paper box machines.
American Type Founders Co., New York; type machines and appliances.
Burrell, D. H., & Co., Poughkeepsie; paper feeding machines.
Campbell Printing Press Mfg. Co., New York; printing presses.
Dexter Folder Co., Fulton; folding machinery.
Gally, Merritt, New York; printing presses.
Hoe, R., & Co., New York; printing presses.
Howard Iron Works, Buffalo; paper cutters.
Inman Mfg. Co., Amsterdam; paper box machines.
Johnson Peerless Works, New York; job presses.
McAdams, John, & Sons, Brooklyn; ruling machinery.
Mergenthaler Linotype Co., New York; type setting machine.
Potter, C., Jr., & Co., New York; printing presses.
Sheridan, T. W. & C. B., New York; book binding machinery.
Thompson, John, Press Co., New York; printing presses.

GROUP 75.

Ottman, J., Lithographing Co., New York; complete lithograph establishment.
Scott, Walter, & Co., Plainfield; lithographic presses.

GROUP 77.

American Street Cleaning Machine Co., Sag Harbor; street cleaning machine.
Ashcroft Mfg. Co., New York; machinery appliances.
Clough & Maconnell, New York; wire corkscrews.
Dejonge, Emil, New York; anti-corrosion.
Hayden & Derby Mfg. Co., New York; injectors.
Hohmann & Maurer Mfg. Co., New York; thermometers.
Nathan Mfg. Co., New York; oil cups, etc.
New York Oil Cabinet Co., New York; oil cabinets.

Rutzler, E., New York; exhaust head for main power plant.

Schaffer & Budenberg, New York; automatic injectors.

Sherwood Mfg. Co., Buffalo; engines, etc.

Smith, Andrew H., New York; street cleaning machines.

Thompson & Bushnell Co., New York; injectors.

Troy Laundry Machinery Co., Troy; laundry machinery.

U. S. Street Sweeping Co., New York; street sweeping machines.

GROUP 78.

Caruss, J. H., & Co., New York; machinery for grinding and polishing lenses.

Gouverneur Machine Co., Gouverneur; mill for sawing stone.

Mitchell, Cornelius S., New York; cherry heating welding compound.

Tabor Mfg. Co., New York; molding machine.

Worthington, Henry R., New York; rolling mill pressure pump.

GROUP 79.

Smith, John E., & Sons, Buffalo; meat choppers.

Squier, Geo. L., Mfg. Co., Buffalo; machines for preparation of food.

Worthington, Henry R., New York; vacuum pumps.

## EXHIBITS CLASSED IN OTHER DEPARTMENTS, BUT INSTALLED IN DEPARTMENT F.

DEPARTMENT G. — GROUP 85.

Worthington, Henry R., New York; wrecking pumps, etc.

# CATALOGUE OF NEW YORK EXHIBITS IN DEPARTMENT G, TRANSPORTATION.

## COLLECTIVE EXHIBIT.

Chart of railroads, showing mileage in 1894, 8724.88 miles.

Model of lock built in Little Falls in 1795; scale 1-30.

Model of standard lengthened lock now in use on Erie canal, scale 1-30.

### MAPS.

State map showing railroads and canals.

Relief map of Erie canal.

### PHOTOGRAPHS.

Annual inspection party, 1892.

Erie Canal Aqueducts:

(1) Crescent over Mohawk river;

(2) Rexford Flats over Mohawk river;

(3) Rochester over Genesee river.

View of tow on Hudson river.

View of village of Black Rock in 1823 (from old engraving).

View of Albany basin in 1825, eastern terminus of canal (from old engraving).

## INDIVIDUAL EXHIBITS.

### GROUP 80.

Brooks, E. J., & Co., New York; freight car sealing service.

Brooks Locomotive Works, Dunkirk; locomotives.

Consolidated Car Heating Co., Albany; model heating systems.

Frost Veneer Seating Co., New York; veneer goods.

General Electric Co., New York; electric locomotives, etc.

Gould Car Coupler Co., Buffalo; couplers.

Greeley, E. S., & Co., New York, track gauges, etc.

Hunt, C. W., Co., New York; machinery for handling material.

Keller Printing Co., New York; railway tickets, etc.

Kinsman Block System Co., New York; model of automatic electric block system.

Merchants Despatch Transportation Co., New York; refrigerator car.

Nathan Mfg. Co., New York; injectors and lubricators.

New York Air Brake Co., New York; air brakes.

New York Car Wheel Co., Buffalo; car wheels.

New York Central and Hudson River Railroad Co., New York; motive power and rolling stock.

Parks, William C., Troy; model of track construction.

Pratt & Letchworth, Buffalo; car couplers.

Safety Car Heating Co., New York; car heating apparatus, etc

Schenectady Locomotive Works, Schenectady; locomotives.

Self Winding Clock Co., New York; train dispatching clock.

Standard Car Coupling Co., New York; car coupling, etc.

Thacher Car and Construction Co., New York; automatic dumping cars.

Trojan Car Coupler Co., Troy; car couplers.

Union Bridge Co., New York; photographs of bridges, etc.

Wagner Palace Car Co., New York; passenger equipment.

Worthington, Henry R., New York; railway water supply pump.

Young Reversible Lock Nut Co., New York; rail joint with locks.

### GROUP 81.

General Electric Co., New York; electric railway equipment.

Greeley, E. S., & Co., New York; overhead construction material.

Jones', J. M., Sons, West Troy; street railway cars.

Parke, Robert A., New York; compressed air street car.

Peckham Motor Truck and Wheel Co., Kingston; motor truck.

Ramapo Wheel and Foundry Co., Ramapo; boltless steel-tired wheels.

Stedman, J. H., Rochester; street railway transfer ticket.

Stephenson, John, New York; cable car.

Stephenson, John, Co., New York; truck for electric railway car.

Taylor Electric Truck Co., Troy; motor truck for street railway.

TRANSPORTATION BUILDING

GROUP 82.

Rankin, T. L., Sacketts Harbor; ice railway.

GROUP 83.

Aubeuf, A. H., Oneida; hand carts, etc.

Barber Asphalt Paving Co., New York; traction recording vehicle.

Brewster & Co., New York; carriages and sleighs.

Buffalo Spring Gear Co., Buffalo; vehicles.

Cately & Ettling, Cortland; top for buggy.

Champion Wagon Co., Owego; farm and lumber wagons.

Columbian Carriage Co., New York; baby carriages.

Cook, William, New York; children's carriages.

Cunningham, Jas., Son & Co., Rochester; carriages, etc.

Curley, John, Brooklyn; carriages, etc.

Dark, Thos., & Sons, Buffalo; garbage wagon.

Deminger, Michael F., Brooklyn; hearse plumes.

Eccles, Richard, Auburn; carriage forgings.

Fenton Metal Mfg. Co., Jamestown; bicycle accessories.

Fitch Gear Co., Rome; wagon gear.

Flandreau & Co., New York; carriages, etc.

Freeland & Bradley, Wellsville; carriage poles.

Geneva Carriage Works, Geneva; wagons, etc.

Getz, Henry, New York; tally-ho coach (1765).

Glens Falls Buckboard Co., Glens Falls; buckboards.

Hall Mfg. Co., New York; luggage carrier and spoke grip.

Hanniman, Chas., New York; baby carriage brake.

India Rubber Co., New York; harness trimmings.

McClinchie, Uriah, New York; baby carriages.

Melville, John, Buffalo; display horses.

Metal Stamping Co., New York; carriage hardware.

Mogul Mfg. Co., New York; steel springs.

Moore, L. Murray, Rochester; trucks, etc.

New York Fifth Wheel Co., Brooklyn; fifth wheel.

O'Connor Hame Fastener Co., New York; hame fastener.

Peerless Mfg. Co., New York; bicycle sundries.

Pratt & Letchworth, Buffalo; hames, saddlery, etc.

Remington Arms Co., Ilion; bicycles, etc.

Rochester Wheel Co., Rochester; vehicle wheels, etc.

Schaefer & Schlegel, Rochester; carriage and hearse trimmings.

Sherman, C. H., Glens Falls; old style sleigh.

Trades News Pub. Co., New York; "The Hub."

Union Hardware Co., Union; coach forgings.

Whitman Saddle Co., New York; saddles, whips, etc.

Whitney, Russell M., Olean; wagon hubs.

Wilson, Myers & Co., New York; bicycles, etc.

Woods, Wm. J., Cold Spring; whiffletree coupling.

GROUP 84.

Otis Bros. & Co., New York; elevators.

Worthington Henry R., New York; elevator pumping machinery.

GROUP 85.

Century Co., New York; drawings of modes of transportation.

Chase Elevator & Manton Windlass Co., New York; windlasses and coal elevator.

Continental Iron Works, Brooklyn; steel furnaces for marine boilers.

Coston Night Signal Co., New York; marine night signals.

Daimber Motor Co., New York; pleasure launch.

De Grauw, Aymar & Co.; boat oars, etc.

Gas Engine and Power Co., New York; naphtha launches.

General Electric Co., New York; electric motors, etc.

Harper Bros., New York; transportation subjects illustrated.

Hogan, T., & Sons; ocean steamship models.

Kahnweiler, David, New York; life saving appliances.

McAdams, John, & Sons, Brooklyn; models of marine brake.

McBean, Edge & Co., Buffalo; vessel signal lights.

Merrill, R., Sons, New York; compasses, etc.

New York and New Jersey Sandy Hook pilots, New York; model of pilot boat.

Nicaraugua Canal Construction Co., New York; relief model of Nicaraugua canal.

Pain, James, & Sons, New York; pyrotechnics for ship's use.

Pratt & Letchworth, Buffalo; propeller wheels.

Providence and Stonington Steamship Co., New York; models and pictures of steamboats.

Rushton, J. H., Canton; row and sail boats, etc.

Safety Car Heating and Lighting Co., New York; gas lighted marine buoys.

Smith & Stanton, New York; drawings of steam vessels.

Spanish Transportation Co., New York; model of S. S. "Pillafo."

Summers, James C., New York; lithograph book of yachts.

Turner, J. Spencer, New York; Ontario cotton sail duck.

Webb, J. Beavor, New York; models of yachts.

### GROUP 86.

General Electrical Co., New York; recovered projector U. S. ship Trenton.

## EXHIBITS CLASSED IN OTHER DEPARTMENTS, BUT INSTALLED IN THIS.

### GROUP 128.

Gould Mfg. Co., Seneca Falls, N. Y.; electric pump.

Otis Bros. & Co., New York; electric pump.

# CATALOGUE OF NEW YORK EXHIBITS IN DEPARTMENT H, MANUFACTURES.

## GROUP 87.

Cheesebrough Mfg. Co., New York; soaps, toilet preparations.

Dodge & Olcott, New York; drugs and chemicals, essential oils.

Durkee, E. R., & Co., New York; flavoring extracts.

Fritzsche Bros., New York; essential oils.

Gardner, R. W., New York; syrup of hydriodic acid.

Gribble & Nash, New York; refined camphor.

Hotchkiss, N. G., Sons, Lyons; essential oils.

Ladd & Coffin, New York; perfumery, cologne and sachet powder.

Lazell, Dalley & Co., New York; perfumery.

Low's, Robert, Son, Brooklyn; toilet soap and perfumeries.

Marx & Rawolle, New York; glycerine.

Morgan, Enoch, Sons, New York; scouring soap.

Ricksecker, Theo., New York; perfumery and toilet goods.

Roessler & Hasslacher Chemical Co., New York; chemicals.

## GROUP 88.

Celluloid Zapon Co., New York; liquid celluloid.

Egyptian Lacquer Mfg. Co., New York; lacquers and varnishes.

Hebbenwhite Mfg. Co., Buffalo; stove polish.

International Ultramarine Works, New York; ultramarine blue.

Johns, H. W., Mfg. Co., New York; paints, oils and stains.

Scientific Art and Decorative Co., New York; decorative paint.

The Frank Miller Co., New York; harness dressing.

Valentine, Lawson, Co., New York; varnishes and colors.

Valentine & Co., New York; varnishes, colors and material.

## GROUP 89.

American Paper Pail and Box Co., New York; paper pails, boxes and napkins.

Arabol Mfg. Co., New York; adhesive pastes.

Bartholomae, H., & Co., New York; wall paper.

Beck, Frederick, & Co., New York; wall paper.

Blickensderfer Mfg. Co., New York; typewriters.

Book Typewriter Co., Rochester; book typewriters.

Caw's Pen and Ink Co., New York; fountain and stylographic pens and writing inks.

Crandall Machine Co., Groton; typewriters.

Columbia Typewriter Mfg. Co., New York; typewriters.

Cyclostyle Co., New York; duplicators, stands and cabinets.

Densmore Typewriter Co., New York; typewriters.

Essex Typewriter, New York; typewriters.

Franklin Manufacturing Co., Rochester; lumber crayons, oil.

Graves, Robert, & Co., New York; wall paper.

Hake, Ph., Mfg. Co., New York; stationery.

Little, A. P., Rochester; office supplies.

Office Specialty Co., Rochester; mercantile labor-saving devices.

Perfection Ink Well Co., Albany; perfection ink wells.

Remington Typewriter, New York; typewriters and appurtenances.

Rockwell & Rupel Co., Rochester; office supplies.

Rogers Manifold and Carbon Paper Co., New York; manifold and carbon paper, typewriter supplies.

Shattuck Pen Co., New York; gold pens, hard rubber fountain penholders and stationery specialities.

Smith, The S. T., Co., New York; typewriter supplies.

Standard Paint Co., New York; insulating and waterproof papers.

The Thompson Norris Co., Brooklyn; bottle packing, cork and corrugated paper goods.

Tiffany & Co., New York; *a.* fine writing papers, envelopes, etc.; *b.* inkstands, paper weights, penholders, etc.

Warren, Fuller & Co., New York; wall paper.

Waterman, L. E., & Co., New York; fountain pens.

Wells Mfg. Co., Syracuse; letter files, indexed books, racks, etc.

Whiting Paper Co., New York; paper, envelopes, visiting cards, etc.

Williams Typewriter Co., Brooklyn; typewriter, punches and perforators.

Wyckoff, Seamans & Benedict, New York; typewriters and appurtenances.

Yost Writing Machine Co., New York; typewriters.

GROUP 90.

Buffalo Brass and Iron Bedstead Co., Buffalo; brass and iron bedsteads.

Herts Bros., New York; furniture decorations and draperies.

Hunzinger, Geo., & Son, New York; chairs, sofas and tables.

Jansen, Edward, New York; interior decorations.

Klaber, S., & Co., New York; Mexican onyx and other marble and bronze ornamentations.

Lewis, P. C., Mfg. Co., Catskill; reclining chairs.

Marks Adjustable Folding Chair Co., New York; five folding chairs.

National Wall Paper Co., New York; *a.* wall papers; *b.* shade rollers.

Nevius & Haviland, New York; spring shade rollers, wall paper.

Sargent Mfg. Co., New York; revolving bookcases.

Schlesinger, Wiessner & Co., South Brooklyn; metallic beds, steel furniture, etc.

Schwarzwaelder, Wm., & Co., New York; roll top desks.

Singer Mfg. Co., New York; sewing machine cabinets.

Smith, B. & W. B., New York; office and store furniture.

Sypher & Co., New York; tapestries, souvenirs of Emperor Napoleon, etc.

Tiffany Glass and Decorating Co., New York; *a.* chairs; *b.* tables.

Tiffany & Co., New York; boudoir mirror and hand mirror.

GROUP 91.

Celadon Terra Cotta Co., Alfred Centre; terra cotta tiles.

Onondaga Pottery Co., Syracuse; china.

Tiffany Glass and Decorating Co., New York; *a.* tiles; *b.* decorations; *c.* mosaics.

GROUP 92.

Tiffany Glass and Decorating Co., New York; *a.* marble monuments; *b.* marble ornaments; *c.* marble mantels.

GROUP 93.

Nicholas Mueller Art Bronze Co., New York; bronze and electro-bronze statuettes.

Power, Maurice J., New York; bronze statuary.

Tiffany Glass and Decorating Co., New York; art metal work, bronzes, basreliefs, iron forging, repousse and chiseled work.

Tiffany & Co., New York; *a.* art metal work, engraved iron, etc.; *b.* cloissone enamels; *c.* champ leve enamels; *d.* niello work.

GROUP 94.

Hoare, J. & Co., Corning; cut, engraved and rock crystal cutting.

Straus, L., & Sons, New York; *a.* cut glassware; *b.* fancy glassware.

Tiffany Glass and Decorating Co., New York; *a.* onyx glass; *b.* glass mosaics, etc.

Tiffany & Co., New York; liqueur bottles, glasses and flasks, cut glass, silver mounted.

GROUP 95.

Tiffany Glass and Decorating Co., New York; *a.* domestic stained glass; *b.* ecclesiastical stained glass.

GROUP 96.

Tiffany Glass and Decorating Co., New York; *a.* wood carving; *b.* ivory carving; *c.* engraved glass.

Tiffany & Co., New York; *a.* ivory carving; *b.* metal carving and chiseling; *c.* sculptured glass.

GOLDEN DOORWAY, TRANSPORTATION BUILDING

GROUP 97.

Diepenbrock & Uchtman, New York; church vestments, flags and banners.

Manhattan Silver Plate Co., Lyons; gold and silver plated hollow ware.

Tiffany & Co., New York; *a.* gold and silver ware, the magnolia vase, collection of yachting trophies, etc.; *b.* silver table ware, plates, salvers, tureens, bowls, baskets, candelabra, epergnes, etc.

GROUP 98.

Bell & Barber, New York; jewelry and ornaments.

Brown's Amber Mfg. Co., New York; amber products.

Canini, J. A., Saratoga Springs; jewelry.

Corbin, D. R., New York; jewelry.

Favre, Leon, New York; process for transferring portraits from a photograph on watches, lockets, etc.

Gaynor & Washburne, New York; interchangeable jewelry.

Tiffany Glass and Decorating Co., New York; onyx ornaments.

Tiffany & Co., New York; *a.* gold and silver ornaments for the person; *b.* collection of diamonds and various colored gems, rough, cut and mounted; *c.* agates, onyx, jasper, etc., ornaments for the person, pearls, natural and mounted.

GROUP 99.

Bundy Manufacturing Co., Binghamton; automatic time recorders.

Self-winding Clock Co., New York; self-winding clocks and method of time distribution by electricity.

Tiffany & Co., New York; *a.* watches and watch-cases, chronographs; *b.* clocks; the Globe clock, astronomical clocks, etc.

GROUP 100.

American Silk Label Co., New York; woven labels.

Blumenthal, A. & S., New York; silk ribbons.

Castle Braid Co., New York; silk and mohair braids.

Cutter, John D., New York, *a.* spool silk and machine twist; *b.* plain silks; *c.* fancy silks.

Dexter, Lambert & Co., New York; *a.* dress silks; *b.* ribbons.

Doherty & Wadsworth, New York; *a.* silk dress goods, surahs; *b.* silk ribbons.

Elwood, B. E. & E., Fort Plain; broad silks.

Empire Silk Co., New York; silk dress goods.

Hamil & Booth, New York; *a.* dress silks, brocades; *b.* ribbons.

Hitchcock & Meding Co., New York; *a.* satin, damask, brocatels, etc.; *b.* dress silks; *c.* ribbon and tie silks.

Jennings Lace Works, New York; laces, gloves, mitts, veils and scarfs.

Johnson, Cowdin & Co., New York; silk ribbons.

Kayser, Julius, & Co., New York; silk underwear, gloves, mitts, etc.

Levy Bros., New York; silk ribbons.

Liberty Silk Co., New York; dress silks.

Pelgram & Meyer, New York; *a.* dress silks; *b.* ribbons.

Robertson, William, New York; silk curtains and upholstery silks.

Stearns, John N., New York; dress silks.

Strange, William, Co., New York; *a.* serges; *b.* dress silks; *c.* linings; *d.* ribbons.

Sutro Bros. Braid Co., New York; trimming braids.

The Rhenania Mills, College Point; silk velvet ribbons.

Trevor, William, New York; cravats, handkerchiefs, ties, etc.

GROUP 101.

Asbestos Specialty Co., Buffalo; asbestos articles.

Johns, H. W., Manufacturing Co., New York; asbestos material woven, spun, felted, etc.

Pantasote Leather Co., New York; substitute for leather.

Potter, Thos., Sons & Co., New York; oil cloths.

Tannette Manufacturing Co., New York; leather imitation for furniture, etc.

## GROUP 102.

Garner & Co., New York; printed cotton piece goods, calicoes, percales, sateens, etc.

New York Mills, New York; cotton goods, white and colored, muslins, jeans, cottonades, camlets, etc.

Standard Oil Co., Troy; wicks.

Thompson, James, & Co., Valley Falls; twines, mosquito nets, buckram, etc.

Wilkes-Barre Lace Manufacturing Co., New York; cotton lace curtains.

## GROUP 103.

Allen, L. L., & Bros., Rochester; fine flannels, dress goods, etc.

American Loop Fabric Co., Brooklyn; blankets, robes, rugs, etc.

Auburn Woolen Co., Auburn; *a.* overcoatings; *b.* suitings.

Canoga Woolen Co., Auburn; woolen goods.

Empire Woolen Mills, Clayville; *a.* all wool fancy cassimeres and overcoatings; *b.* worsted coatings and suitings.

French & Ward, New York; eiderdown fabrics.

Globe Woolen Co., Utica; *a.* beavers, cassimeres; *b.* worsted coatings and suitings.

McFarland Co., Amsterdam; knit underwear.

Stott, C. H. & F. H., Stottsville; *a.* woolen goods; *b.* woolen goods woven on cotton warps.

Titus, Elias, & Sons, Poughkeepsie; *a.* woolen goods; *b.* cotton and woolen mixed goods.

Waterloo Woolen Manufacturing Co., Waterloo; *a.* flannels, carriage cloths; *b.* blankets, shawls, etc.

## GROUP 104.

Adler, Jacob, & Co., New York; gloves.

Allen, John C., Gloversville; gloves and mittens.

Altman Summer Neckwear Co., New York; summer neckwear.

Beatty, C. F., New York; prints of engraving in steel, brass and zinc for hatters.

Bell's, Henry H., Sons, Milton; knit goods, hosiery, etc.

Brill Bros., New York; men's shirts.

Brooklyn Shield Co., Brooklyn; dress shields.

Cluett, Coon & Co., Troy; shirts, collars and cuffs.

Curtis, H. C., & Co., Troy; shirts, collars and cuffs.

Delsarte Corset Co., New York; corsets, waists and shoulder braces.

Dempster & Place, Gloversville; gloves and mittens.

Dryfoos, L., & Co., New York; skirts.

Earl & Wilson, New York; men's collars and cuffs.

Excelsior Fur and Glove Sewing Machine Co., New York; sewing machine.

Foster, Paul & Co., New York; kid gloves.

Haley, C. J., & Co., New York; hose supporters.

Hull & Co., Poughkeepsie; trousers.

Jaeger's, Dr., Sanitary Woolen System Co., New York; knit goods and hosiery, etc.

Jaros Hygienic Underwear Co., New York; woolen underwear.

Knox, E. M., New York; hats.

Lehman, Chas. F., Brooklyn; cork helmets.

Mayer, Strouse & Co., New York; corsets.

McFarlan, A., & Co., Amsterdam; knit goods and hosiery.

Millen, E., & Co., New York; shirts.

Mills, S. J., Rochester; silk dress waist.

Northrup Glove Co., Johnstown; gloves.

Self-threading Sewing Machine Co., New York; sewing machine attachment.

Seybel, F. W., New York; ladies' hats.

Siegel Bros., New York; ladies' underwear and muslin.

Singer Manufacturing Co., New York; sewing machines.

Stiehl, G. H., & Co., New York; head wear.

Swits, Coude, Oswego; knit goods.

United Shirt and Collar Co., Troy; ladies' collars and cuffs.

Van Orden Corset Co., New York; corsets.

Weingarten Bros., New York; corsets.

Williams Mfg. Co., Plattsburgh; sewing machines.

## GROUP 105.

Gunther's, C. G., Sons, New York; furs and skins, stuffed animals.

Shayne, C. C., New York; furs.

Treadwell, Geo. C., Co., Albany; seal fur garments.

GROUP 106.

Crotty & Mitchell, Weedsport; dress stays.
Excelsior Quilting Co., New York; fancy quilting and stitching.
Gerschal, Victor, & Co., New York; pearl buttons.
New England Whalebone Manufacturing Co., New York; articles made from whalebones.
Tiffany Glass and Decorating Co., New York; *a.* needle work, etc.; *b.* art embroidery.
Tiffany & Co., New York; jade fan and ostrich feather fans.

GROUP 107.

India Rubber Comb Co., New York; combs and brushes.

GROUP 108.

Cheval Standard Co., New York; horse measuring canes.
De Muth, Wm., & Co., New York; *a.* smokers' articles; *b.* walking canes.
Hacker, J. C., New York; leather goods and novelties.
Tiffany & Co., New York; *a.* dressing cases and valises; *b.* cases for silverware, jewelry, etc.; *c.* fancy bags, pouches, purses, card cases, smokers' articles, etc.; *d.* cases, silver and gold mounted; *e.* umbrellas and parasols, fancy handles.

GROUP 109.

India Rubber Comb Co., New York; hard and soft rubber goods.

GROUP 110.

Estes, E. B., & Sons, New York; turned wooden novelties.
Ives, Blakeslee & Williams Co., New York; mechanical toys.
Jansen, Ed., New York; fancy baskets.
Pia, Peter F., New York; pewter toys.
Rice & Hochster, New York; tortoise shell articles.
Tiffany & Co., New York; *a.* bonbonierres and fancy boxes, etc.; *b.* fancy leather and gold pocket books, blotters, etc.

GROUP 112.

Buffalo Scale Co., Buffalo; scales.
Mogul Manufacturing Co., New York; spring scales.
National Meter Co., Brooklyn; water meters.
Neptune Meter Co., New York; water meters.
Springer Torsion Balance Co., New York; scales.
Thomson Meter Co., Brooklyn; water meters.
Worthington, Henry R., New York; water meters.

GROUP 113.

Bannerman, Francis, New York; guns.
Burgess Gun Co., Buffalo; firearms.
Emerson, Charles H., Whitehall; boomerang.
Lefever Arms Co., Syracuse; hammerless guns.
Remington Arms Co., Ilion; firearms.

GROUP 114.

Hohenstein, H., New York; lamp and candle shades, candles, etc.
Rochester Lamp Co., New York; lamps.
Steam Gauge and Lantern Co., Syracuse; lamps and lanterns.
Tiffany Glass and Decorating Co., New York; *a.* gas fixtures; *b.* electric fixtures.

GROUP 115.

Abendroth Bros., Port Chester; *a.* furnaces; *b.* hot water heaters; *c.* stoves and ranges.
Co-operative Foundry Co., Rochester; stoves and ranges.
Cortland Howe Ventilating Stove Co., Cortland; heating stoves.
Gorton & Lidgerwood Co., New York; house heating boiler.
Howard Thermostat Co., Syracuse; heat regulators.
Jackson, Edwin A., & Bros., New York; grates.
Kelsey Furnace Co., Syracuse; furnaces.

Pease, J. F., Furnace Co., Syracuse; hot water, steam and combination heaters.
Ronalds & Co., New York; boilers and copper ware.
Stroud, Jas., New York; roasting pans and rollers.
Superior Furnace Co., Little Falls; hot air furnaces.
Troemner, Henry, New York; coffee mills.
Tuttle & Bailey Mfg. Co., New York; registers, ventilators, screens, pedestals, etc.
Warner, J. W., Oneida; hot water heater and boiler.

GROUP 116.

Iron Clad Manufacturing Co., New York; enameled ware, milk cans.
Matthews, John, Apparatus Co., New York; soda water apparatus.

GROUP 117.

Tiffany Glass and Decorating Co., New York; artistic lattice work.

GROUP 118.

Bayer & Scherbner, New York; artistic wrought iron, grille work, etc.

GROUP 119.

Bardsley, Jos., New York; wooden door knobs, door springs, checks and checking spring hinges.
Bohannan, Wilson, Brooklyn; latches, locks, handles, etc.
Bommer Bros., Brooklyn; spiral spring hinges.
Campbell Cutlery Co., Syracuse; cutlery.
Carey Safe Co., Buffalo; safes.
Jennings, C. E., & Co., New York; carpenters' tools.
Kearney & Foot Co., New York; files and rasps.
Maydole, David, Hammer Co., Norwich; hammers.

GROUP 120.

Alberene Stone Co., New York; sanitary and plumbing specialties.
Iron Clad Mfg. Co., New York; boilers.
Oswego Indurated Fibre Co., Oswego; bath tubs, laundry trays, sinks, etc.
Stewart Ceramic Co., New York; *a.* wash tubs, sinks, etc.; *b.* bath tubs.

GROUP 121.

Campbell Cutlery Co., Syracuse; display trays for cutlery, etc.
Cushman & Dennison, New York; pocket oil cans.
Improved Cloak Rack Co., New York; revolving cloak stands for exhibiting cloaks.
Iron Clad Mfg. Co., New York; tubular rives.
Major, A., New York; cement for rubber and leather goods and crockery ware.
McDowell Co., New York; garnet drafting machines.
North American Phonograph Co., New York; phonographs.
Palmenberg's Sons, J. R., New York; window display fixtures and forms.
Queen Silver Polish Co., New York; silver polish.
Rodwell Manufacturing Co., Buffalo; sign letters.
Stafford, N., New York; metal badges, checks, numbers and signs.
Tiffany & Co., New York; medals.
Tiffany Glass and Decorating Co., New York; church furniture.
Wyckoff, Seamans & Benedict, New York; typewriters' supplies.

DEPARTMENT K. — GROUP 142.

Tiffany & Co., New York; illuminating on parchment paper, blazonry of heraldic and other devices.

GROUP 143.

Tiffany & Co., New York; copper and steel engraving, printing, stamping and illuminating by steel and other dies.

LEATHER AND SHOE TRADES BUILDING

GROUP 145.

Tiffany & Co., New York; *a.* engraved diamond, rock-crystal, jade and other hard stones; *b.* series of the Columbus medals (the official exposition badge) in various metals.

## COLLECTIVE EXHIBIT OF UNITED STATES POTTERS' ASSOCIATION.

GROUP 91.

Onondaga Pottery Co., Syracuse; *a.* semi-porcelain, white granite; *b.* translucent china, decorated ware.

## WOMEN'S DEPARTMENT.

GROUP 88.

Hall, Fannie E., New York; ceramic colors.

Puissegur, Sophie B., New York; varnishes.

GROUP 89.

Parks, Anna M., Albany; perforating machine.

## COLLECTIVE EXHIBIT OF COLUMBIAN CERAMIC ASSOCIATION, CLASS 577.

Adams, Miss E., Troy; painted china plate.

Baker, Miss Amelia, Watertown; painted china tete-a-tete.

Nevins, Miss Louise R., Brooklyn; painted china plates and jewel box.

Richart, Mrs. Christine F., Buffalo; painted china.

Strong, Miss Lydia Lyod, Flatbush; painted china brush and comb tray.

Van Auken, Miss Adele, Rochester; painted china tray.

Dwight, Minnie T., New York; decorated china.

Scott, Cora E., Saratoga Springs, decorated china.

GROUP 95.

Tillinghast, Miss, New York; stained glass window.

GROUP 104.

Howard, J. Imogen, New York; children's dresses.

Mills, Mrs. S. J., Rochester; dress waist.

Tracy, Mrs. Harriet Ruth; sewing machine inventions.

GROUP 106.

Bassett, Mrs. F. E., Brooklyn; tapestry for wall decoration.

Scott, Cora E., Saratoga Springs; art embroideries.

GROUP 115.

Lawton, Mrs. Jas. M., New York; maize grater.

GROUP 121.

Dostie, Mrs. G. W., Johnstown; dress cutting system.

## COLLECTIVE EXHIBIT OF THE MERCHANT TAILORS OF THE UNITED STATES.

### GROUP 104.

Bastable & Mannigan, New York; overcoat, breeches and leggins.

Doll, Edwin N., New York; morning coat, Tuxedo coat, vests and trousers.

Franklin & Co., suit for youth.

Merwin, B. R., New York; dress suit, house jacket, Tuxedo coat, etc.

Muller, A. F., New York; riding habit, waist and skirt.

Nagel, Conrad F., New York; dress coat, waistcoat and trousers.

Patterson, John, & Co., New York; liveries, overcoat, trousers, etc.

Saalmann, John B., New York; single-breasted box overcoat.

Twyeffort, E., New York; morning hunting coat, waistcoat and breeches.

Vredenburgh & Brooks, New York; double-breasted frock coat and waistcoat, trousers.

Weiss, Jules C., & Co., New York; driving overcoat, dress coat (style 1793), trousers.

Wessman, J. P., New York; overcoat, dress coat, waistcoat and trousers.

### GROUP 121.

Mitchell, John J., New York; American fashion plates.

## LEATHER AND SHOE TRADES EXHIBIT.

### GROUP 87.

Hoyt, Arthur S., New York; cold water glue.

### GROUP 88.

Cameron, Donald, Brooklyn; shoe dressing.

Miller, The Frank, Co., New York; leather dressings and blackings.

### GROUP 103.

Dolge, Alfred, Dolgeville; felt goods, boots, shoes and slippers made of same.

### GROUP 104.

Burt, Edwin C., New York; boots, shoes and slippers.

Charles & Curtiss, New York; shoes, gaiters and boots.

Ford, C. P., & Co., Rochester; ladies', misses' and children's fine shoes.

Gardner, John C., Brooklyn; misses', children's and infants' shoes and slippers.

Hanan & Son, New York; boots, shoes and slippers.

Harvey Fastening Co., New York; overgaiter fasteners.

Lattemann, J. J., Shoe Manufacturing Co., New York; boots, ties and slippers.

### GROUP 111.

Barnet, J. S., & Bro., New York; finished leather.

Fayerweather & Ladew, New York; belting and shoe leather.

Hauselt, Charles, New York; *a.* calfskins; *b.* glazed kid.

Hoople, William Howard, New York; Goodyear welting.

Johnstone & Buckley, New York; welting.

Levor, Gustav, Gloversville; patent shoe kid and kangeroo leather.

Moffat, David, & Co., New York; harness leather.

Weed, James B., & Co., Binghamton; finished leather.

### DEPARTMENT G.—GROUP 83.

Whitman Saddle Co., New York; equestrian goods.

### DEPARTMENT F.—GROUP 72.

Booth Bros., Rochester; turning and cording machines.

Lighting Beader Co., Springville; upper beading machines.

Singer Mfg. Co., New York; sewing machines for leather work.

# CATALOGUE OF NEW YORK EXHIBITS IN DEPARTMENT J, ELECTRICITY AND ELECTRICAL APPLIANCES.

## GROUP 122.

Edwards & Co., New York; Ruhmkorff coil.

General Electric Co., New York and Boston; *a.* magnets; *b.* induction coils, converters and tranformers.

Greeley, E. S., & Co., New York; *a.* statical apparatus; *b.* magnets; *c.* induction coils, etc.

Waite & Bartlett Mfg. Co., New York; induction machine.

## GROUP 123.

Bunnell, J. H., & Co., New York; testing set, rheostat and galvanometers.

Commercial Cable Co., New York; *a.* condensers; *b.* submarine cable instruments.

General Electric Co., New York and Boston; instruments of precision, voltmeters, ammeters, watt meters, etc.

Greeley, E. S., & Co., New York; *a.* resistance coils; *b.* condensers; *c.* batteries; *d.* voltmeters, ammeters, standard testing instruments, etc.

Hirlemann, C. J., New York; batteries.

Vetter, J. C., New York; controller, milliamperemeter.

## GROUP 124.

Edison Mfg. Co., New York; primary batteries and accessories.

Greeley, E. S., & Co., New York; open and closed circuit, primary and secondary batteries.

Hirlemann, C. J., New York; primary batteries.

Leclanche Battery Co., New York; batteries.

Mason Electric Co., New York; primary batteries, battery powder, zinc, amalgamating compound.

Meyrowitz, E. B., New York; storage batteries.

Pfund, Richard, New York; plunge battery.

Union Electric Co., New York; storage batteries.

Vetter, J. C., & Co., New York; electric batteries.

## GROUP 125.

C. & C. Electric Motor Co., New York; direct current dynamos.

Crocker-Wheeler Electric Co., New York; motor dynamos.

Excelsior Electric Co., New York; arc light dynamos and power plant.

General Electric Co., New York; direct and alternating current dynamos.

Greeley, E. S., & Co., New York; direct and alternating current dynamos.

Wing, J. H., & Co., New York; direct current dynamos.

Zucker & Levett Chemical Co., New York; direct current dynamos.

## GROUP 126.

Benham & Durnham, New York; feed wire for electric railway track.

Brixey, W. R., New York; wires, cables.

Celluloid Zapon Co., New York; celluloid for insulation purposes.

Commercial Cable Co., New York; ocean cable operating apparatus.

C. & C. Electric Motor Co., New York; cables, wires, rheostats, switches, meters.

Electrical Conduit Co., New York; conduits.

Electric Selector and Signal Co., New York; *a.* signal indicator; *b.* electric light locks.

Empire China Works, Brooklyn, hard porcelain supplies.

Fibre Conduit Co., New York; interior and underground conduits.

General Electric Co., New York and Boston; *a.* rheostats, switches and meters; *b.* safety appliances, lightning arresters and cut-outs; *c.* underground conduits.

Gould Mfg. Co., Seneca Falls, controlling apparatus on triplex electric tank pump.

Greeley, E. S., & Co., New York; *a.* rheostats, switches; *b.* lightning rod supplies, fuses, etc.; *c.* submarine, ærial and underground cables.

India Rubber Comb Co., New York; *a.* rubber insulation; *b.* hood insulators. tubing, sheeting, etc.

India Rubber and Gutta Percha Insulating Co., New York; electric cables and cords.

Johns, H. W., Mfg. Co., New York; *a.* insulating sheets, vulcabeston; *b.* moulded mica, asbestos; *c.* conduits.

Murphy, T. J., New York; switchboard.

National Conduit Mfg. Co., New York; cement lined pipe for conduit.

New York Insulated Wire Co., New York; insulated cables, wires, tapes, conduits, etc.

Norwich Insulated Wire Co., New York; electric light cables.

Okonite Co., New York; okonite electric wire.

Pass & Seymour, Syracuse; cut-outs and switches.

Roessler & Hasslacher, New York; electrical supplies and appliances.

Safety Insulated Wire and Cable Co., New York; lead covered underground conductors for arc light circuits, rubber covered overhead conductors for lights, alarms, etc.

Standard Paint Co., New York; *a.* insulating compounds, tape, paper; *b.* armature varnish and paints.

Union Electric Co., New York; pipe underground conduits.

Van Nuis, C. S., New York; switches.

Vail, W. A., New York; swinging ball lightning arresters.

Vetter, J. C., & Co., New York; current controller and millammeter.

## GROUP 127.

Commercial Cable Co., New York; motors.

Crocker-Wheeler Electric Co., New York; *a.* direct constant current motors; *b.* alternating current motors.

C. & C. Electric Motor Co., New York; motors.

Edison Mfg. Co., New York; electric motors.

Excelsior Electric Co., New York; direct and alternating current motors.

General Electric Co., New York; direct and alternating current motors.

Greeley, E. S., & Co., New York; power motors.

Meyrowitz, E. B., New York; direct constant current motor.

Union Electric Co., New York; constant potential compound motors.

Wing, L. J., & Co., New York; motors.

Zucker & Levett Chemical Co., New York; motors.

## GROUP 128.

Commercial Cable Co., New York; motor operating telegraph instruments.

C. & C. Electric Motor Co., New York; motors generally applied.

Crocker-Wheeler Electric Co., New York; electric motors.

Crowell & Gilmer, Brooklyn; pressure blower and reservoir.

Electric Launch and Navigation Co., New York; electric passenger launches.

General Electric Co., New York; *a.* motors for railways; *b.* motors for general application; *c.* motors for novelties.

Gould Mfg. Co., Seneca Falls; electric pump.

Greeley, E. S., & Co., New York; sewing machine, rotary fan and electric chimes.

Lidgerwood Mfg. Co., New York; mining hoist.

Mason Electric Co., New York; motors for fans, sewing machines, etc.

Merrill Brothers, Brooklyn; drop hammer, trimming press.

N. Y. Air Brake Co., New York; air brake equipment.

Otis Brothers & Co., New York; electric elevators and pumps.

Pelton Water Wheel Co., New York; water wheel.

Stephenson, John, & Co., New York; street railway truck.

Taylor Electric Truck Co., Troy; street railway truck.

Union Electric Co., New York; *a.* underground railway appliances; *b.* electric launches.

Vetter, J. C., & Co., New York; domestic appliances.

Wing, L. J., & Co., New York; motors for disc fans, ventilators, etc.

Worthington, Henry R., New York; electric pumps.

Zucker & Levett Chemical Co, New York; pumps, cranes and organs.

## GROUP 129.

C. & C. Electric Motor Co., New York; power generators.

Electric Selector and Signal Co., New York; arc light cut-outs.

Excelsior Electric Co., New York; *a.* arc lamps and appliances; *b.* incandescent system and appliances.

ELECTRICITY BUILDING

Frink, J. P., New York; screen reflectors for incandescent lamps.

General Incandescent Arc Light Co., New York; arc lamps for incandescent circuits.

General Electric Co., New York and Boston; *a.* search lights and arc system, luminous electrical fountains; *b.* incandescent system; railway.

General Fixture Co., New York; incandescent and arc fixtures.

Greeley, E. S., & Co., New York; arc lighting, etc.

Johns, H. W., Mfg. Co., New York; appliances for incandescent lighting.

Randa, Otto, New York; electric scarf pin.

Union Electric Co., New York; incandescent lighting by secondary batteries.

Vetter, J. C., & Co., New York; incandescent current adapter and tap.

Zucker & Levett Chemical Co., New York; fixtures for arc and incandescent systems.

GROUP 130.

Greeley, E. S., & Co., New York; heating apparatus.

Johns, H. W., Mfg. Co., New York; asbestos sheathing and fire felt.

GROUP 131.

Excelsior Electric Co., New York; *a.* electrotyping. *b.* electroplating, gilding and nickeling. *c.* electro deposition of metals. *d.* electrolytic separation of metals from ores.

Fern, J. J., Brooklyn; electroplating, burnishing and finishing.

General Electric Co., New York and Boston; electrotyping, plating, gilding, etc.

Johns, H. W., Mfg. Co., New York; insulating material.

Ringler, F. A., New York; *a.* photo-electrotyping. *b.* electroplating. *c.* electro deposition of metals.

Zucker & Levett Chemical Co., New York; electrotyping, plating and deposition.

GROUP 132.

Phelps, A. H., Glens Falls, N. Y.; brasing and engraving.

GROUP 133.

Bunnell, J. H., & Co., New York; keys, sounders, transmitters, etc.

Commercial Cable Co., New York; automatic and multiplex transmitters.

Electric Selector and Signal Co., New York; telegraph and railroad signals, etc.

Fitch, E. Sherman, New York; printing telegraph.

General Electric Co., New York; dynamos for quadruplex telegraph service.

Greeley, E. S., & Co., New York; systems for receiving and transmitting chronography, annunciators, thermostats, alarms, etc.

Non-Magnetic Watch Co., New York; non-magnetic watches, etc.

Western Union Telegraph Co., New York; quadruplex telegraph apparatus.

GROUP 134.

Brixey, W. R., New York; telephone cables.

Edwards & Co., New York; signaling apparatus.

Electric Selector and Signal Co., New York; telephone signaling apparatus.

Greeley, E. S., & Co., New York; telephone wires and cables, protective devices, switchboards, etc.

National Conduit Mfg. Co., New York; underground conduits.

Norwich Insulated Wire Co., New York; telephone cables.

Safety Insulated Wire and Cable Co., New York; rubber covered conductors and cables.

GROUP 135.

General Electric Co., New York and Boston; dental drills, etc.

Greeley, E. S., New York; cautery, dental and surgical apparatus.

Mason Electric Co., New York; *a.* cautery batteries. *b.* dental lamps and motors.

Meyrowitz, E. B., New York; electrodes.

Union Electric Co., New York; *a.* cautery apparatus. *b.* surgical apparatus, aluminum hand lamps, dental engines, medical batteries. *c.* apparatus for diagnosis.

Vetter, J. C., & Co., New York; surgical and dental apparatus.

Waite & Bartlett Mfg. Co., New York; special faradic apparatus.

GROUP 136.

Commercial Cable Co., New York; writing apparatus.

Greeley, E. S., & Co., New York; gas-lighting and blasting apparatus.

Wing, L. J., & Co., New York; isolated electric lighting.

GROUP 137.

Electrical Engineer, New York; electrical books and publications.

Electrical Review, New York; electrical books and publications.

Electrical World, New York; electrical books, etc.

Electricity Newspaper Co., New York; electrical books and publications.

General Electric Co., New York and Boston; historical models and books.

Street Railway Journal, New York; electric and street railway publications.

GROUP 138.

General Electric Co., New York; patent exhibits.

Woods, G. F., New York; map of electrical diagrams.

GROUP 138A.

Falls Rivet and Machine Co., New York; line shafting, clutches, etc.

General Electric Co., New York and Boston; apparatus for electrical construction and repair, etc.

Greeley, E. S., & Co., New York; construction tools and fixtures.

Ingersoll-Sergeant Drill Co., New York; air compressor.

Lake Erie Engineering Works, Buffalo; electric motor engines.

Merrill Bros., Brooklyn; drop hammer, press, etc.

McIntosh, Saynour & Co., Auburn; engines, driving dynamos.

Phelps, A. H., Glens Falls; apparatus for electro thermo-gravure of glass.

Union Electric Co., New York; electricon anti-friction metal, etc.

# REPORT ON THE FINE ARTS EXHIBIT.

By an arrangement between the New York State Board of General Managers and the chief of the department of fine arts, Mr. Halsey C. Ives, the New York members of the Federal advisory committee for fine arts were constituted an art bureau for the State of New York, whose duties it should be to select an adequate representation at the exposition of the works of New York artists.

The members of this bureau were as follows:

*Sculptors:* J. Q. A. Ward, Augustus St. Gaudens, Olin L. Warner.

*Painters:* William M. Chase, Eastman Johnson, H. Bolton Jones, R. Swain Gifford, Frank D. Millet.

*Architects:* Richard M. Hunt, Stanford White, William B. Tuthill.

Mr. Frederick Dielman and Mr. George W. Maynard were associated with the committee, representing Mr Millet, who for the greater portion of the time was absent in Chicago. On October 22, 1892, a preliminary organization was formed at the Century Club, and on December 21, 1892, a formal organization was perfected. J. Q. A. Ward was elected chief of the bureau and William B. Tuthill secretary.

It was decided to hold a preliminary competition in New York city and to send to the fair such works only as should in the opinion of the committee possess recognizable merit. Circular letters were at once sent to all painters, sculptors, architects and other art workers throughout the State, outlining the plan adopted by the bureau.

A committee from the bureau, consisting of Messrs. Johnson, Jones and Tuthill, were delegated to procure suitable, commodious and fireproof quarters for the works of art to be submitted to the juries of selection. Through the courtesy and public spirit of Colonel Appleton, Major Kipp and Captain Lydecker, of the Seventh regiment armory committee, certain portions of the armory on Sixty-sixth and Sixty-seventh streets were obtained for this purpose, without cost to the bureau. The gathering and selection of the works of art occupied the greater portion of January, February and March, 1893, and the distribution of the same, at the close of the exposition, the months of December, 1893, and January, 1894. The armory was thus in use nearly six months, and the generosity and State loyalty of the armory committee are gratefully acknowledged.

On December 6, 1892, there were added to the juries of painting and drawing Miss Mary Cassatt and Mrs. Mary Hallock Foote as representatives of the Women's Board.

The committee of selection began work on January 16, 1893, and continued till about the end of the month. The handling and transportation of the works of art were placed in charge of a special committee consisting of Messrs. Chase, Dielman and Tuthill. The following tables give an accurate view of the amount of work done by the committee during these months and the wide interest taken in the fair by New York artists:

| | | |
|---|---|---|
| Number of works entered on application: | | |
| Paintings in oil | | 1,480 |
| Water colors | | 268 |
| Sculpture | | 73 |
| Architecture | | 181 |
| Etchings | | 280 |
| Wood engravings | | 227 |
| Chalk, charcoal, etc | | 622 |
| Total | | 3,131 |
| Number of works submitted to the juries of selection: | | |
| Paintings in oil | | 758 |
| Water colors | | 173 |
| Sculpture | | 50 |
| Architecture | | 186 |
| Etchings | | 191 |
| Wood engravings | | 278 |
| Chalk, charcoal, etc | | 501 |
| Total | | 2,137 |
| Number of works accepted for the Chicago Exposition: | | |
| Paintings in oil | 324 | |
| Water colors | 63 | |
| Sculpture | 37 | |
| Architecture | 99 | |
| Etchings | 174 | |
| Wood engravings | 255 | |
| Chalk, charcoal, etc | 397 | |
| Total | | 1,349 |
| Number of "invited" works of art in New York city. | 281 | |
| Number of "invited" works of art from places other than New York city | 85 | |
| Total loan exhibition | | 366 |
| Total number of works sent to Chicago | | 1,715 |

After the close of the fair 1,331 works were returned to the art bureau, and by them distributed to their owners, and ninety-nine works (architecture) were returned at the cost of the exposition. The remainder were disposed of as follows at the expense of the consignees: Forty-nine were sent to the Pennsylvania Academy of Fine Arts; twenty-five to the Art Club of Philadelphia; twenty-five to the Mid-winter Exposition at San Francisco; thirty-nine to the World's Fair Prize Winners Association, and 147 directly to owners or artists at their request.

The entire cost of the exhibit was borne by the Board of General Managers. The total amount of money disbursed directly by the art bureau

PALACE OF FINE ARTS

was $15,846.13, of which $3,424.14 was for packing and cartage, $3,879.54 for transportation, $3,390.96 for insurance, $1,955.15 for redistributing works at the close of the exposition, and $1,485 for clerical hire. The remainder was for office and miscellaneous expenses.

No salary of any kind was paid to any member of the art bureau. It should be stated that all the works of art were transported to Chicago by fast express in charge of messengers, and an insurance of $500,000 placed upon the total collection. The return shipment was made under the supervision of the Board of General Managers, and the most of the works returned as general merchandise by freight with an insurance of $100,000. The total cost of reshipment and insurance was $1,060.

The exhibit from New York occupied seven-twelfths of the American section, and gave acknowledged character to the department. Eighty-six New York artists received medals and diplomas, which covered 540 of the 1,349 works contributed to the fair. Eleven of New York's most prominent artists were members of the awards committee, and their works were consequently excluded from competition. The remarkable success of the American paintings and statuary, when compared with the best work of foreign masters, has done much to popularize American art and to remove the absurd impression, so long prevalent, that a work of art to be really great must bear a foreign name.

New York city, as the art center of America, furnishes the standard for the rest of the country, and the notable victory gained at the Chicago Exposition is a direct acknowledgment of the superiority of New York art and New York artists.

For the figures and statistics in this report we are indebted to the kindness of the secretary of the art bureau, William B. Tuthill.

# CATALOGUE OF NEW YORK EXHIBITS, DEPARTMENT K, FINE ARTS.

## SCULPTURE.

Adams, Herbert, Brooklyn. — St. Agnes' Eve (plaster bust, colored); Primavera (marble bust); portrait bust of lady (marble).

Baur, Theodore, New York.— Panel of Joseph Jefferson as Rip Van Winkle, Bob Acres and Dr. Pangloss (bronze).

Bissell, Geo. E., New York.— John Watts, last Royal Recorder of New York and founder of the Leake and Watts Orphan House (bronze).

Brooks, Caroline S., New York.— Lady Godiva Returning (relief in marble); La Rosa (Vanderbilt group) (marble); Lady Godiva (marble); The Dreaming Iolanthe (relief in marble).

Bush-Brown, H. K., Newburgh.— The Buffalo Hunt (plaster).

Cannon, H. Legrand, New York.— Bas-relief of Elizabeth Mary Cannon (bronze).

Ciani, Vittorio A., New York.— A Cavalier (bronze statuette).

Cushing, Robert, New York.— Bust of Cardinal McCloskey (bronze).

Elwell, F. Edwin, New York.— Charles Dickens and Little Nell (bronze); Intellect Dominating Brute Force, or Diana and the Lion (marble).

French, Daniel C., New York.— Bust of A. Bronson Alcott (bronze); The Angel of Death and the Sculptor (plaster).

Hartley, J. S., New York.— Pan (bronze group), lent by Dr. Fiske, Brooklyn; bust of William Conant Church (bronze), lent by Col. W. C. Church, New York; John Gilbert as Sir Philip Teazle (bronze).

Mills, J. Harrison, New York.— Portrait medallion (plaster).

Martiny, Philip, New York.— Portrait bust of child (plaster).

Niehaus, C. H., New York.— Historical door for Trinity Church, New York, six panels (plaster); Athlete (plaster).

O'Donavan, Wm. Russell, New York.— Bust of Thomas Eakins (bronze); bust of R. Swain Gifford (bronze).

Proctor, A. Phimister, New York.— Polar bear (two) (plaster casts for life-size statues on bridge, World's Columbian Exposition; panther (bronze).

Rogers, John, New York.— Statue of Abraham Lincoln seated (plaster).

Ruckstuhl, F. Wellington, New York. —Evening (marble).

Warner, Olin L., New York.— Diana Reclining (plaster statuette); medallion of Joseph, chief of the Nez Perces Indians (bronze); Rosalie Olin Warner (bronze bust); model for a Caryatid (plaster); bronze medallions (eight) of Columbia River Indians; bust of Mozart (heroic) for public fountain, Portland, Ore. (plaster); portrait of J. Alden Weir (bronze bust).

### Sculptures in the Loan Collection.

Rodin, Auguste, Paris, France.— Francesca and Paolo — "L'Amour;" Francesca and Paolo — "La Rupture; " Andromeda.

[Marbles from "The Gates of Hell," commissioned by the French government for the Museum of Decorative Arts, Paris.] Lent by Mr. Henry Sargent, New York.

## OIL PAINTINGS.

### Retrospective Exhibit, Review of American Painting from Its Beginning to the Year 1876.

Bispham, Henry C. (1841–1882).— French Cattle. Lent by Mr. William Bispham, New York.

Cole, Thomas (1801–1848). — Roman Aqueduct. Lent by Mr. Henry G. Marquand, New York; The Tornado (Corcoran Art Gallery).

Durand, Asher Brown (1796–1886). — Landscape. Lent by Mr. Gouverneur Kemble, New York.

Fuller, George (1822–1884).— Original study for "The Romany Girl." Lent by Mr. Thomas B. Clarke, New York.

Fulton, Robert (1765–1815).— Portrait of Joel Barlow. Lent by Mr. Peter T. Barlow, New York.

Gifford, Sandford R. (1823–1880). — Hunter's Mountain. Lent by Mr. J. W. Pinchott, New York.

Gignoux, Regis (1816–1892).— Market Scene. Lent by the Century Association, New York.

Holloway, T.— Engraving from the Portrait of Benjamin West, as President of the Royal Academy. (Painted by himself.) Lent by Mr. Clarence Winthrop Bowen, New York.

Hunt, William M. (1824–1879).— Boy and Butterfly. Lent by Mr. Richard M. Hunt, New York.

Irving, John Beaufain (1825–1877).— Washington's Visit to General Rhann. Lent by Mr. Thomas B. Clarke, New York.

Kensett, Jno. F. (1818–1872).— Landscape. Lent by the Century Association, New York.

Leslie, Charles R. (1794–1859).—Uncle Toby and Widow Wadman. Lent by Mr. Gouverneur Kemble, New York.

McEntee, Jervis (1828–1890). — The Shower of Gold; The Clouds. Lent by Mr. S. D. Coykendall, Rondout; Eastern Sky at Sunsent. Lent by Mr. Thomas B. Clarke, New York.

Malbone, Edward G. (1777–1807). — Portrait of William Dana, of Boston; Portrait of Mrs. William Dana, daughter of Major Robert Davis of the Revolutionary Army. (Painted from life between 1790 and 1800.) Lent by Gen. Chas. W. Darling, Utica.

Mignot, Louis R. (1831–1870).— Chimborazo. Lent by the Century Association, New York.

Mount, Wm. Sidney (1807–1868).— The Power of Music. Lent by the Century Association, New York.

Page, William (1811–1855).— Portrait of Mrs. Page; Portrait of the artist. Lent by Mr. W. D. Page, Staten Island.

Peale, Charles Willson (1741–1827).— Portrait of Angelica Peale. Lent by Mr. Clarence Winthrop Bowen, New York.

Quartley, Arthur (1839–1886).— Summer Morning, Isle of Shoals. Lent by the Union League Club, New York.

Ramage, John (—— 1794).— Portrait of George Washington. (Painted in 1783.) Lent by Mrs. S. M. Beach, Peekskill.

Robertson, Archibald (1765–1835).— Portrait of George Washington; Portrait of Martha Washington. (Painted from life, at the Presidential Mansion, 1791, 1792.) Lent by Mrs. Chas. W. Darling and Mrs. S. M. Mygatt, granddaughters of the artist, Utica.

Stuart, Gilbert (1755–1828).— Portrait of Robert Young of Virginia. Lent by Mr. John Russell Pope, New York.

Weir, Robert (1803–1889).— Taking the the Veil. (Painted at West Point, 1863.) Lent by Mrs. S. M. Weir, New York.

West, Benjamin (1738–1820).— Portrait of the artist as President of the Royal Academy. Lent by Mr. Clarence Winthrop Bowen, New York; Expulsion from Eden. Lent by Mr. Thomas B. Clarke, New York.

Wright, Joseph (1756–1793).— Portrait of Martha Washington; Portrait of George Washington. Lent by Mr. Clarence Winthrop Bowen, New York.

## OIL PAINTINGS.

Alexander, Harry, New York.— Chinese Interior.

Allen, W. S., New York.— Evening at the Lake.

Amsden, Wm. T., New York.— Spanish Meadows.

Armstrong, Maitland, New York.— White House at Pont Aven, Brittany.

Baer, Wm. J., New York.— Day Dreams.

Beckwith, Carroll, New York.— Mr. Isaacson; Portrait of Miss E. A. Hall (lent by Miss Hall, New York).

Bell, E. A., New York.— Portrait, Study of a Lady in Gray.

Blakelock, R. A., Cloverdale.— Landscape (lent by Mr. Thomas B. Clarke, New York); Moonlight (lent by Mr. W. M. Laffiin, New York).

Blashfield, Edwin H., New York.— Christmas Bells; Portrait; The Angel with the Flaming Sword.

Blenner, Carle J., New York.— Contentment; Portrait of El Senor Don Roderigo de Saavedra, Jr., of Royal Spanish Legation, Washington, D. C. (lent).

Bogert, Geo. H., New York.— Moonlight, Etaples, France; Morning.

Boston, Joseph H., Brooklyn.— Gladys, a portrait.

Bristol, J. B., New York.— Mount Chocorua, N. H.

Brown, Matilda, New York.— An Unwilling Model.

Brown, J. Appleton, New York.— Spring Time.

Brown, J. G., New York.— A Card Trick; Homeward Bound (lent by Mr. W. T. Evans, New York); Pull for the Shore (lent by Mr. Isidor Strauss, New York); The Stump Speech; When We Were Girls (lent by Mr. E. Asiel, New York); Training the Dog; At the Old Cottage Door (lent by Mr. Gilbert Gaul, New York).

Brush, George de Forest, New York.— The Head Dress (lent by Mr. H. H. Fay, Boston); The Indian and the Lily (Lent by Mr. C. D. Miller, Jersey City); Mother and Child (lent by Mr. J. M. Sears, Boston); The Sculptor and the King (lent by Mr. Henry Failing, Portland, Ore.).

Butler, Howard Russell, New York.— Church of Guadaloupe, Aguas Calientes; Seaweed Gatherers, Finistere, France; Marine.

Butler, Geo. B, New York.— Girl with Tambourine.

Buttles, Mary, New York.— Peasant Woman of Alsace; Julie.

Chapman, Carlton T., New York.— On Cape Ann (lent by Mrs. John Hutton, New York); Five o'clock at St. Ives, England.

Chase, William M., New York.— Portrait of Mrs. L.; Lady in Pink; Lilliputian Boats in the Park (lent by Mr. R. L. Knoedler, New York); Portrait of Mrs. E. (lent); Alice, a portrait.

Church, F. S., New York.—The Viking's Daughter (lent by Mr. John Gellattly, New York); Knowledge is Power (lent by Mr. C. L. Freer, Detroit, Mich.).

Clark, Rose, Buffalo.—Mother and Child.

Clark, Walter, New York.—Spring.

Clinedinst, B. W., New York.—Monsieur's Mail; The Water Colorist.

Coffin, Elizabeth R., Brooklyn.—Hanging the Net.

Coffin, Esther L.—Grapes.

Coffin, Wm. A., New York.—Evening lent by Mr. J. M. Lichtenauer, New York); Twilight (lent by Mr. John B. Ladd, Brooklyn); Early Morning (lent by Mr. W. Seward Webb, New York); September Breeze (lent by Mr. W. Seward Webb, New York); Moonlight in Harvest; A Pennsylvania Farm after a Thunder Shower.

Cohen, Geo. W., New York.—A Tale of the Sea.

Collins, Alfred Q., New York.—Portrait of Joe Evans.

Coman, Mrs. Charlotte B., Waterville.—The Road to Town; Florida; A Stony Brook.

Connah, Douglas John, New York.—Portrait (lent by Mrs. John Connah, New York).

Cox, Mrs. Kenyon (Louise H. King), New York.—The Lotos Eaters; A Rondel.

Cox, Kenyon, New York.—Echo; Diana; May; A Solo; Flying Shadows (lent by Mr. Stanford White, New York); Portrait of L. H. K. (lent by Mrs. Kenyon Cox, New York); Music (lent by Mr. E. Finney, Milwaukee, Wis.); Painting and Poetry; An Eclogue; Portrait of Roger D. (lent by Mr. Charles Deering, Chicago, Ill.); Portrait of St. Gaudens (lent by Alex. St. Gaudens, New York); The Pursuit of the Ideal; A Vision of Moonrise (lent by Mr. Charles Deering, Chicago, Ill.).

Craig, Thomas B., New York.—An Upland Pasture (Morning).

Crane, Bruce, New York.—The Harvest Field (lent by Mr. Andrew Carnegie).

Curran, Charles C., New York.—Winter Morning in a Barnyard (lent by Mr. Geo. I. Tysou, New York); A Corner in a Barnyard (lent by Mr. Thomas B. Clarke, New York); A Breezy Day (lent by Mr. Thomas B. Clarke, New York); A Cabbage Garden (lent by Mrs. J. A. Hewlett, Brooklyn); The Iris Bed (lent by Mr. Wm. S. Hollingsworth, New York); Sealing the Letter (lent by Mr. Henderson, Minneapolis); Hall of the Venus de Milo, in the Louvre, Paris (lent by Mr. H. F. Shriver, New York); A Winter Fog; Early Morning in June (lent by Mr. Samuel T. Shaw, New York); Under the Awning (lent by Mrs. K. R. Papin, Chicago).

Day, Francis, New York.—A Table d'Hote.

Dearth, Henry J., Easthampton.—Autumn (lent by Mr. Geo. I. Tillotson, New York); A Long Island Garden.

De Forest, Lockwood, New York.—Moonrise Among the Ruins of Palmyra.

De Haas, M. F. H., New York.—New England Coast.

Dellenbaugh, Frederic S., New York.—On the Moquis Cliffs, Arizona.

Denman, Herbert, New York.—The Trio.

Dewey, Charles Melville, New York.—The Hush of Day (lent by Mr. L. A. Ault Cincinnati, O.); Shadows of the Evening Hour (lent by Mr. W. T. Evans, New York); The Prelude of Night; The Return of the Hay Boats (lent by Mr. W. T. Evans, New York).

Dewing, T. W., New York.—Portrait of W. M. Chase (lent by Mr. Wm. M. Chase, New York); The Days (lent by Miss Cheney, South Manchester, Conn.); Summer Twilight (lent by Mr. C. L. Freer, Detroit, Mich.); A Portrait (lent by Mr. Stanford White, New York); A Musician (lent by Mr. C. L. Freer, Detroit); Portrait (lent by Mr. Stanford White, New York); A Lady in Blue (lent by Mr. C. L. Freer, Detroit).

Deming, E. W., New York.—A Mourning Brave.

Dielman, Frederick, New York.—A New York Arab (lent by Mr. William Semple, Louisville, Ky.).

Dillon, Julia, New York.—Peonies.

Donoho, G. Ruger, New York.—La Marcellerie; The Explorers (lent by Mr. J. Hull Browning, New York).

Du Mond, Frank Vincent, New York.—Christ and the Fisherman; Monastic Life; Holy Family.

Dubé, Mrs. Mattie, New York.—Pumpkins and Onions.

Eaton, C. Harry, New York.—Landscape (lent by Mr. Henry A. Rust, Chicago).

Eaton, Chas. Warren, New York.—Woods in Winter; Moonrise: October; On the Maine Coast.

Emmett, Lydia Field, New Rochelle.—Noonday (lent by Miss A. B. Phelps, Wilkesbarre, Pa.); The Mere.

Evans, Mrs. M. E., New York.—September Lane.

Evans, Joe, New York.—The Red Gate; The Plainfield Road.

Faxou, Wm. Dailey, New York.—Maia; Lady in Profile.

Foss, Harriet Campbell, New York.—A Flower Maker.

Foster, Ben., New York.—A Maine Hillside (lent by Mr. Jas. T. Pettus, New York); The Returning Flock; First Days in Spring (lent by Mr. Jas. T. Pettus,

ADMINISTRATION BUILDING, Taken Chicago Day

New York); In Fontainebleau Forest (lent by J. F. Drummond, New York).

Fowler, Marie B. O., New York.—Marie.

Fowler, Frank, New York.—Portrait, A Figure in White (lent by Mrs. Wm. A. Fowler, Brooklyn); Portrait (lent by Dr. Neftel, New York); Portrait (lent by Mr. Walter Shirlaw, New York); Portrait, Girl in Black; Portrait (lent by Mr. H. W. Goodrich, New York).

Fraser, John A., New York.—An English Spring Morning.

Gaul, Gilbert, New York.—Charging the Battery (lent by Mr. W. T. Evans, New York); Silenced (lent by Mr. W. M. Chase, New York).

Gay, Edward, Mt. Vernon, N. Y.—Mother Earth.

Gifford, R. Swain, New York.—Over the Summer Sea; Telegraph Station at Sandy Hook; Landscape (lent by Mr. J. B. Wheeler, New York); Autumn (lent by Mr. Thomas B. Clarke, New York); The Sea-weed Gatherers; Salt Works of Padanaram; Sand Dunes (lent by Mrs. Robert Carter, New York); The Cove Road, Naushon Island, Mass. (lent by the Detroit Club, Detroit); Moorlands; The Rock of Gibraltar (lent by Mrs. H. E. Lawrence, New York); Nashawena (lent by Mr. Thomas B. Clarke, New York).

Gill, Rosalie Lorraine, New York.—Twilight on St. Ives Bay; Portrait of Miss Inglis.

Green, C. A., Brooklyn.—Peonies.

Green, Frank Russell, New York.—My Sweetheart (lent by Mr. Thomas B. Clarke, New York).

Hammer, John J., New York.—Spring Flowers.

Hardie, Robert Gordon, New York.—Portrait of the Artist's Wife.

Harper, W. St. John, Easthampton.—Autumn; Easthampton (lent by Mr. W. T. Evans, New York).

Harris, Charles X., New York.—The Mowers (lent by Mr. Fredk. James, New York).

Hasbrouck, D. F., New York.—A Winter Morning in the Catskills (lent by Mr. E. W. Gillette, Chicago).

Haskell, Ida C., New York.—Mother Love.

Hassam, Childe, New York.—Midsummer Morning; A Snowy Day on Fifth Avenue; Autumn; Cab Station, Rue Bonaparte, Paris; On the Way to the Grand Prix.

Henry, Edward L., New York.—The Wedding Day (lent by Mr. Dickensen, Mt. Holyoke, Mass.); The County Fair (lent by Mr. W. F. Havemeyer, New York).

Herter, Albert, New York.—Portrait of Mrs. H.

Hill, Roswell S., New York.—Young Girl Reading.

Howland, A. C., New York.—Fourth of July Parade (lent by Mr. W. H. Fuller, New York).

Huntington, Daniel, New York.—Portrait of the Hon. Seth Low; The Goldsmith's Daughter; Portrait of Elliot F. Shepard, Jr.; Elise.

Irwin, Benoni, New York.—Portrait of Hubert Herkomer; Sweet Sixteen.

Isham, Samuel, New York.—Portrait of a Lady.

James, Frederick, New York.—An Impromptu Affair in the Days of the Code.

Johns, Laura A., New York.—Apple Trees in Sunlight (lent by Mr. H. C. Johns, Decatur, Ill.).

Johnson, Eastman, New York.—The Cranberry Harvest, Nantucket Island, Mass. (lent by Auguste Richard, New York); The Nantucket School of Philosophy (lent by Mr. E. D. Adams, New York); Portrait of the Artist; Portrait of a Girl (lent by Mr. D. L. Einstein, New York); Portrait of Dr. McCosh (lent by Mr. Alexander Maitland, New York); Two Men; Life Size Portrait (lent by Archibald Rogers, Hyde Park).

Jones, Francis C., New York.—Exchanging Confidences (lent by Mr. Thomas B. Clarke, New York); The Favorite Grandchild; On the White Sand Dunes (lent by Mr. John Gellattly, New York).

Jones, H. Bolton, New York.—Spring; The Flax Breaker (lent by Mr. R. J. Menafee, Louisville, Ky.).

Kappes, Alfred, New York.—Tattered and Torn (lent by the Boston Art Club, Boston, Mass.); Rent Day (lent by Mr. Thomas B. Clarke, New York).

Keith, Mrs. Dora Wheeler, New York.—Portrait of Laurence Hutton (lent by Mr. Hutton).

Kendall, Wm. Sargent, New York.—St. Yves Pray for Us; The Glory of Fair Promise.

Ketcham, Susan M., New York.—Portrait of a Lady.

Koehler, Robert, New York.—The Strike; The Carpenter's Family; At the Café.

Koopman, August B., New York.—The Orphans; Dreaming of One Afar; Asking a Blessing.

La Farge, John, New York.—Study of a Boy's Head (lent by Mr. Edward W. Hooper, Cambridge, Mass.); Halt of the Wise Men from the East (lent by Museum of Fine Arts, Boston); Visit of Nicodemus to Christ; A Venetian Guitar Player—a design for stained glass.

Lamb, Ella Condie, New York.—The Advent Angel.

Lampert, Emma E., Rochester.—Behind the Dunes; A Hillside in Picardy.

Low, Will H., New York.—Love Disarmed (lent by Mr. G. G. Hubbard, Washington, D. C.); In an Old Garden (lent by Dr. C. B. Kelsey, New York); May Blossoms (lent by Smith College, Northampton, Mass.); A Woodland Glade; The Portrait (lent by Mr. W. T. Evans, New York).

Lyman, Joseph, New York.—Early Snow in the Adirondacks; Sand Dunes at Annisquam, Mass.

McIlhenny, C. Morgan, Shrub Oak.—On the Beach.

Martin, Homer D., New York.—Old Manor at Cricqueboeuf (lent by Dr. D. L. Stimson, New York); Mussel Gatherers at Villerville, Normandy (lent by Mr. F. L. Gunther, New York); Behind the Dunes, Lake Ontario; Head Waters of the Hudson (lent by Mr. Thomas B. Clarke, New York).

Maynard, Geo. Willoughby, New York.—Flora (lent by Mrs. K. R. Papin, Chicago); Portrait of F. D. Millet (lent by Mr. Millet); Pomona; Civilization (lent by the National Academy of Design, New York).

Metcalf, W. L., New York.—Road to the Village, Normandy; Summer Twilight; Tunisian Market (lent by Mr. H. R. Astor Carey, New York).

Mignot, Louis R. (deceased), New York.—Niagara.

Miller, Chas. H., New York.—A Gray Day on Long Island; The East River, New York.

Millet, F. D., New York.—The Window Seat (lent by Mr. Chas. Fairchild, Boston); Lacing the Sandal (lent by Mr. Thomas B. Clarke, New York); Sweet Melodies (lent by Mr. D. M. Ferry, Detroit); At the Inn (lent by the Union League Club, New York); Old Harmonies (lent by Mrs. H. K. Porter, Pittsburg); Antony Van Corlear, the Trumpeter; A Difficult Duet (lent by Mr. C. M. Raymond, New York); Rook and Pigeon (lent by Mr. H. McK. Twombly, New York).

Minor, Robert C., New York.—The Close of Day (lent by Mr. W. T. Evans, New York); Autumn; Evening.

Moeller, Louis, New York.—Searching (lent by Mr. Thomas B. Clarke, New York); Stubborn (lent by Mr. Thomas B. Clarke, New York).

Moran, Edward, New York.—The First Ship Entering New York Harbor; Life Saving Patrol, New Jersey Coast (lent by Mr. Amedee Fargis, New York); Melodies of the Sea (lent by Mrs. Martha E. French, Chicago); The White Squadron's Farewell Salute to Commodore John Ericsson.

Moran, Thomas, New York.—Grand Canon of the Yellowstone; Iceberg in Mid-Atlantic.

Moran, Leon, New York.—Back from the Post Office.

Mowbray, H. Siddons, New York.—The Rose Harvest (lent by Mr. T. Helman, New York); Arcadia (lent by Mr. W. T. Evans, New York); Scheherezade, "Arabian Nights" (lent by Mr. Thomas B. Clarke, New York); The Evening Breeze (lent by Mr. Thomas B. Clarke, New York).

Murphy, J. Francis, New York.—November Grays; The Hazy Morn.

Needham, Charles Austin, New York.—Mott Haven Canal, New York City; A Street in New York City; Near Factory Hollow, Turner's Falls, Mass.

Newcomb, Mrs. Marie Guise, New York.—Sheep in the Clearing.

Nicoll, J. C., New York.—"Will It Rain To-Morrow?"; Sunlight on the Sea.

Ochtman, Leonard, New York.—Along the Mianus River; Night; Harvesting by Moonlight (lent by Mr. Fredk. Benedict, New York).

Palmer, Walter L., Albany.—Autumn Morning; Mists Clearing Away (lent by Mr. Jno. G. Myers, Albany); An Early Snow (lent by Mr. F. D. Huett, New York); January (lent by Mr. Thomas B. Clarke, New York).

Parsons, Orrin Sheldon, New York.—Lawn Tennis; A Lady in Black (lent by Mr. J. L. Hunt, New York).

Parton, Arthur, New York.—Evening After the Rain (lent by Mr. Geo. I. Seney, New York); In the Month of May (lent by Mr. W. T. Evans, New York).

Penfold, Frank C., Buffalo.—Herring Season, Pas de Calais.

Phelps, Helen Watson, New York.—Abandon.

Picknell, Wm. L., New York.—Early Morning; Sunday Morning; The Edge of Winter (lent by Mr. F. A. Hammond, New York); The Road to Concarneau (lent by Mr. Thomas B. Clarke, New York).

Platt, Charles A., New York.—Winter Landscape; Early Spring.

Raught, John Willard, New York.—Gorse Cutters, Brittany; The Highway, Brittany.

Rehn, F. K. M., New York.—Where Waves and Sunshine Meet; Close of a Summer's Day (lent by the Buffalo Club, Buffalo).

Reid, Robert, New York.—Portrait of Little Miss S. (lent by Mrs. L. H. Stevens, New York); The Red Flower; Vision of St. Angela d'Agnant; Her First Born.

Reinhart, C. S., New York.—Washed Ashore; Awaiting the Absent.

Rice, Wm. M. J., New York.— Landscape; Evening Clouds; Portrait; Portrait.

Robinson, Theodore, New York.— A Roman Fountain; Winter Landscape (lent by Mr. J. M. Lichtenauer, New York); The Layette.

Rose, Guy, New York.— Food for the Laborers; The End of the Day; Potato Gatherers.

Sartain, William, New York.— Sand Dunes at Manasquam; Nubian Sheik.

Schilling, Alexander, New York.— A Day in Spring (lent by Mr. Alexis Ludwig, Leonia); Landscape (lent by Mr. Alexis Ludwig, Leonia).

Sewell, Mrs. Amanda Brewster, New York.— By the River; Portrait of Mother and Son; Sappho; Portrait of Mrs. Boudinot Keith (lent by Mrs. J. M. Wheeler, New York); Washing Place in the Gatinais; Pleasures of the Past; A Sylvan Festival.

Sewell, Robert V. V., New York.— Diana Hunting; Winter; In Shanty Town; Boys Bathing; Sea Urchins.

Shepley, Annie B., New York.— The Wonderful Story.

Sheppard, Warren, Brooklyn.— The Restless Sea (lent by Mr. J. S. Fassett, Tonawanda).

Shields, Thomas W., Brooklyn.— Cavalier, time of Louis XIII.

Shirlaw, Walter, New York.— Toning the Bell (lent by Mr. J. H. Willing. Chicago); Sheepshearing in the Bavarian Highlands; Rufina (lent by the Century Association, New York).

Shurtleff, R. M., New York.— Autumn Forest (lent by Mr. W. T. Evans, New York); In Autumn Woods; Looking East at Sunset.

Simmons, Edward E., New York.— Early Moonlight; Bay of St. Ives; The Carpenter's Son; Darby and Joan.

Smedley, W. T., New York.— Embarrassment (lent by Mr. Thomas B. Clarke, New York).

Smillie, Geo. H., New York.— From West Mountain, Conn.; A Lush Place (lent by Washington Wilson, New York); Mill Pond at Ridgefield, Conn. (lent by John S. White, New York).

Smith, Henry P., New York.— Old Oaks at Waterford (lent by Latham A. Fish, Brooklyn); Landscape at Waterford, Conn.

Smith, De Cost, New York.— Sioux Lovers (lent by Mr. E. Reuel Smith, New York); Driven Back.

Slade, Emily, New York.— Portrait of Miss C. C. C.

Sontag, Wm. L., New York.— Mt. Jefferson and Mt. Adams, White Mountains, N. H.

Strickler, John R., Brooklyn.— Interrupted.

Taggart, George, Watertown.— A Portrait.

Thayer, Abbott H., Scarboro.— Portrait of Lady (lent by Miss C. F. Stillman, New York); Brother and Sister (lent by Mr. A. A. Carey, Boston); Virgin Enthroned (lent by Mr. J. M. Sears, Boston).

Thompson, Wordsworth, New York.— The Deserted Inn; In the Sweet Summer Time (lent by Mr. George H. Babcock, Plainfield, N. J.).

Throop, Frances Hunt, New York.— Spring Carnations; Portrait of a Lady.

Tiffany, Louis C., New York.— Market at Nuremburg, Bavaria; Pottery Market at Wurtsberg.

Toaspern, Otto, New York.— Music.

Tompkins, Clementina M. G., New York.— A Beginner in Art.

Towner, Flora L., Albany.— Portrait.

Trotter, Mary K., New York.— Daphnis; Lamplight.

Tryon, D. W., New York.— New England Village; Evening; Night (lent by Mr. Thomas B. Clarke, New York); Starlight (lent by Mr. Thomas B. Clarke); Winter Evening (lent by Mr. Thomas B. Clarke); October (lent by Mr. Thomas B. Clarke); Morning (lent by Mr. John Newall, Chicago); A Winter Afternoon; A Salt Marsh, December; Daybreak, New Bedford Harbor; Springtime (lent by Mr. C. L. Freer, Detroit); Autumn (lent by Mr. C. L. Freer); Sunset at Sea (lent by Mr. C. L. Freer); Rising Moon, Autumn (lent by Mr. C. L. Freer); The Rising Moon (lent by Mr. C. L. Freer).

Turner, C. Y., New York.— Saw Wood and Say Nothing; Washing Day; The Coppersmith (lent by Mr. Theo. Marburg, New York); Gossips (lent by Mr. Thomas B. Clarke, New York); On the Beach, Easthampton (lent by Mr. W. M. Chase, New York); Afternoon Tea (lent by Mr. Chester W. Chapin, New York); The Grand Canal, Dordrecht, Holland (lent by Mr. John Taylor Johnston, New York); John Alden's Letter; Courtship of Miles Standish (lent by Mr. Henry C. Howells, Flushing), The Days That Are No More; The Pride of the Farm.

Tyler, Bayard H., New York.— Waiting.

Tyler, James G., New York.— The Norman's Woe (lent by Mr. J. M. Jones, New York).

Van Boskerck, Robert W., New York.— A Rhode Island River; The Hackensack Meadows; Sand Road from the Sea (lent by Mr. H. R. C. Watson, New York).

Van Etten, Kruseman, New York.— Late Autumn.

Van Gorder, L. E., New York.— The Terrace, Central Park, New York.

Walker, Henry O., New York.— Boy on a Donkey (lent by Mrs. S. D. Warren,

Boston); The Gift Bearers (lent by Miss E. H. Bartol, Boston); Hagar and Ishmael.

Walker, Horatio, New York.—A Stable Interior.

Weir, J. Alden, New York.—Summerland; The Lane; The Christmas Tree; Autumn; The Young Student; Portrait of Webb Weir; The Open Book; Portrait.

Wentworth, Cecilia E., New York.—Prayer.

Whittemore, Wm. J., New York.—Autumn Sunshine.

Whittredge, W., New York.—Rhode Island Coast; The Old Hunting Ground (lent by Mr. J. W. Pinchot, New York); The Plains (lent by the Century Club, New York).

Wigand, Albright, Mt. Vernon.—Portrait of M. J. Albright.

Wigand, Otto C., Mt. Vernon.—The Old Willow Tree.

Wiggins, Carlton, New York.—Evening, Village of Grez (lent by Mrs. Chas. M. Kurtz, New York); Clouds and Sunshine (lent by Mr. Chas. E. Dingee, Brooklyn); Midsummer (lent by Mr. John F. Diugee, Brooklyn).

Wiles, L. M., New York.—The Old Quarry.

Wiles, Irving R., New York.—Sunshine and Flowers; Sunlight in the Studio (lent by Mr. C. D. Miller, Jersey City); The Sonata (lent by Mr. W. T. Evans, New York.); Portraits; A Girl in Black (lent by Mr. W. M. Chase, New York); A Lady in Green.

Witt, J. H., New York.—The Celestial Choir.

Wyant, A. H. (deceased).—In the Adirondacks (lent by Mr. W. T. Evans, New York); Evening (lent by Mrs. A. L. Wyant, New York); Sunset in the Woods (lent by Mr. J. M. Lichtenauer, New York); Clearing Off; An October Day; Sunset (lent by Mr. Fredk. B. Pratt, Brooklyn); In the Woods.

LOANED BY CITIZENS OF NEW YORK.

By Mr. J. R. Ball, New York.—Roses (Weir, John F., New Haven).

By Mr. Thomas B. Clarke, New York.—Nine O'Clock (Inness, Geo., Montclair, N. J.); September Afternoon (Ibid.); Near Marshfield (Ibid.); Sunburst (Ibid.); The Millpond (Ibid.); A Gray Lowery Day (Ibid.); The End of the Shower (Ibid.); Twilight (Ibid.) The Delaware Valley (Ibid.); A Sunny Autumn Day (Ibid.); A White Mountain Valley (Ibid.); A Puritan Girl (Valk, Douglas, Minneapolis); Silence (Baker, William Bliss, deceased); Glass Blowers (Ulrich, Charles F., Munich, Bavaria); The Two Guides (Homer, Winslow, Scarboro, Maine); The Camp Fire (Ibid.); March Wind (Ibid.); A Great Gale (Ibid.); Maine Coast in Winter (Ibid.).

By Mr. W. T. Evans.—Normandy Landscape (Eaton, C. Harry); In the Land of Promise, Castle Garden (Ulrich, Chas. F., Munich, Bavaria); Reflection (Fitz, B. R., deceased).

By Mr. Davis Johnson—A Venetian Model (Vedder, Elihu).

By Mr. C. Klackner—Southern Field Trials, 1891 (Tracy, John M., deceased).

By Col. J. G. Moore.—Delilah (Vedder, Elihu, Rome); Sampson (Ibid.).

By Mr. William R. O'Donovan.—The Sculptor (Eakins, Thomas, Philadelphia).

By Mrs. A. F. Roudebush.—The Cup of Love (Vedder, Elihu, Rome, Italy); The Young Marsyas (Ibid.); A Soul in Bondage (Ibid.).

By Messrs. Reichard & Co.—The Return from the Hunt (Homer, Winslow).

By Mr. Augustus St. Gaudens.—Portrait (Sargent, John S., London, Eng.).

By Chas. Scribner's Sons.—The Brooklyn Bridge (Twachtman, J. H., Greenwich, Conn.).

By Mr. F. L. Smith.—Portrait (Smith, Frank Eugene, Munich, Bavaria).

By Mr. W. H. Tailer, Dobbs Ferry.—The Water's Edge (Gardner, Elizabeth, Paris).

By Mrs. E. A. Thouron.—Resting (Thouron, Henry, Philadelphia).

By the University Club, New York.—Portrait of Admiral Farragut (Weir, John F.).

By Mr. J. B. Wheeler.—The Pursuit (Trego, William T., North Wales, Penn.); Morning (Vedder, Elihu, Rome, Italy).

LOAN COLLECTION OF FOREIGN WORKS FROM PRIVATE GALLERIES IN NEW YORK STATE.

From Mrs. Prescott Hall Butler.—Beach at Portici, Italy (Fortuny, Mariano, 1838–1874, Spain).

From Mr. William Buchanan.—Sun Breaking through the Mist (Francais, Francois-Louis, Paris); An Odalisque (Carolus-Duran, Emile-Auguste, Paris).

From Mr. Alfred Corning Clark.—After the Bath (Millet, Jean Francois, 1814–1875, France); The Gleaners (Ibid.); Christ at the Tomb (Delacroix, Ferd. Victor Eugene, 1798–1863, France); Tiger Quenching his Thirst (Ibid.); Le Montreur de Serpents (Gerome, Jean Leon, France); Evening (Corot, Jean Baptiste Camille, 1796–1875, France); Coast near Dieppe (Daubigny, Charles Francois, 1817–1878).

From Mrs. Alfred Corning Clark.—The Haymaker (Millet, Jean Francois, 1814–1875, France).

From Mr. L. Crist. Delmonico.—A Sewing Bee in Holland (Uhde, Fritz von, Munich, Bavaria).

GOVERNMENT BUILDING

From Mr. Wm. H. Fuller.—The Plain of Montmartre, Paris (Michel, Georges, 1743–1833, France); The Horseman (Ibid.); The Open Sea (Dupre, Jules, 1812–1889, France); Weymouth Bay (Constable, John, 1776–1837, England).

From the collection of the late Jay Gould.—Eveniug (Carot, Jean Baptiste Camille, 1796–1875, France); A Pastoral (Bonheur, Mlle. Rosa, Paris); View on the Seine (Rousseau, Theodore, 1812–1867, France).

From Mr. Collis P. Huntington.—Colza Gatherers (Breton, Jules Adolphe, Paris); The Spy (Neville, Alphonse Marie de, 1836–1887, France).

From Mr. Henry Havemeyer.—The Flight from Sodom (Corot, Jean Baptiste Camille, France); Dogs and Hare (Courbet, Gustave, 1819–1877, France).

From Mr. James S. Inglis.—The Dead Toreador (Manet, Edouard, 1833–1883, France).

From Mr. Meyer Jonassen.—Study, French Peasant Girl's Head (Desau, Louis P., France).

From Mr. Joseph Jefferson.—The Flock (Mauve, Anton, 1838–1888, Holland).

From Mr. Henry G. Marquand.—A Reading from Homer (Alma-Tadema, Laurens, London).

From Mr. D. W. Powers, Rochester.—The Falconer (Fromentin, Eugene, 1820–1876, Paris.)

From Mr. Albert Spencer.—Dawn on the Coast of the North Sea (Monet, Claude, Paris); Morning Fog (Ibid.); Race Horses (Degas, Paris); In the Garden (Renoir, A., Paris).

From Mr. Frank Hill Smith.—A Lone Tree, Autumn (Rousseau, Theod., 1812–1867, France).

From Mr. Cornelius Vanderbilt.—A Drove of Cattle and Sheep (Troyon, Constant, 1810–1865, France).

## WATER COLORS.

When not otherwise designated the residence of the artists in this list is New York city. The numerals attached denote the number of pictures on exhibition.

Baker, J. Elder. 1.
Birney, Wm. Verplanck. 1.
Blashfield, Edwin H. 1.
Bradbury, M. R. 1.
Bradley, Horace. 1.
Bricher, A. T. 1.
Brown, J. G. 1.
Carter, Ferdinand A., Syracuse. 1.
Chapman, Carlton T. 1.
Church, F. S. 1.
Coffin, Esther L. 2.
Curran, C. C. 2.
Daingerfield, Elliott. 1.
De Luce, Percival. 1.
Drake, W. H. 2.
Eaton, C. Harry. 3.
Eaton, Chas. Warren. 3.
Edwards, Geo. Wharton. 2.
Foster, Ben. 3.
Franzen, August. 2.
Fraser, John A. 5.
Gibson, W. Hamilton, Brooklyn. 8.
Gifford, R. Swain. 4.
Hammer, John J. 1.
Harison, Mary A., Brooklyn. 1
Hassam, Childe. 5.
Henry, Edward L. 1.
Herter, Albert. 1.
Ihlefield, Henry. 1.
Jones, Francis C. 1.
Jones, H. Bolton. 3.
Kappes, Alfred Van Courtlandt. 1.
Keller, Arthur J. 1.
La Farge, John. 2.
Lampert, Emma E., Rochester. 2.
McChesney, Clara T. 2.
McIlhenny, C. Morgan, Shrub Oak. 3.
Manley, Thos. R. 1.
Maynard, Geo. Willoughby. 2.
Mente, Charles. 4.
Millet, F. D. 1.
Minor, Robert C. 1.
Moran, Edward. 1.
Nichols, Rhoda Holmes. 3.
Nicoll, J. C. 4.
Needham, Chas. Austin. 1.
Ochtman, Leonard. 1.
Perrie, Bertha E. 1.
Pitkin, Caroline W. 1.
Pomeroy, Grace V. 1.
Redmond, J. J. 1.
Rehn, F. K. M. 1.
Rix, Julian. 2.
Satterlee, Walter. 2.
Sawyer, D. Wallace. 1.
Schilling, Alexander. 2.
Scott, Mrs. E. M. 4.
Sherwood, Rosina Emmet. 3.
Smedley, W. T. 9.
Smillie, N. S. J. 1.
Smith, F. Hopkinson. 4.
Snell, Henry B. 1.
Thulstrup, T. de. 3.
Tiffany, Louis C. 6.
Tyler, James G. 1.
Vanderveer, Mary A., Amsterdam. 1.
Walton, Wm. 1.
Whittemore, Wm. J. 5.

## CHALK, CHARCOAL, PASTEL, PENCIL AND OTHER DRAWINGS. WORKS IN BLACK AND WHITE, ETC.

Allan, W. R. 4.
Bacher, Otto H. 3.
Binney, Martha G. 1.
Birch, Reginald B. 2.
Blashfield, Edwin H. 3.
Blum, Robert. 17.
Bradley, Horace. 1.

Brown, J. Appleton. 4.
Burns, M. J. 2.
Champney, J. Wells. 3.
Chapman, Carlton T. 3.
Chase, Wm. M. 2.
Church, F. S. 2.
Cox, Kenyon. 4.
Denman, Herbert. 2.
Dumond, F. V. 5.
Eaton, Charles Warren. 4.
Edwards, George Wharton. 2.
Emmet, Lydia Field. 1.
Fraser, John A. 4.
Gates, J. H. 1.
Gaul, Gilbert. 12.
Gibson, C. D. 3.
Gibson, W. Hamilton, Brooklyn. 15.
Hammer, John. 1.
Hecker, Caroline T. 1.
Hyde, W. H. 1.
Josephi, J. A. 1.
Kemble, E. W., New Rochelle. 2.
Low, Will H. 3.
Metcalf, W. L. 3.
Millet, F. D. 5.
Mills, Lena. 2.
Mowbray, H. Siddons. 1.
Necker, Caroline T. 1.
Parsons, Alfred. 9.
Pennington, Harper. 1.
Perard, Victor. 2.
Reinhart, C. S. 7.
Remington, Frederick, New Rochelle. 12.
Reynolds, Alice M. 1.
Robinson, Theodore. 1.
Rogers, W. A. 11.
Sherwood, Rosina Emmet. 4.
Shirlaw, Walter. 1.
Smedley, W. T. 25.
Smith, F. Hopkinson. 3.
Taber, W. 1.
Taylor, Charles J. 1.
Thulstrup, T. de. 18.
Tyler, Bayard H. 2.
Van Schaick, S. W. 5.
Wenzell, A. B. 16.
Wiles, Irving R. 17.
Woodward, J. D. 1
Zogbaum, R. F. 3.

## PEN AND INK DRAWINGS.

Bacher, Otto H. 3.
Bellew, F. P. W. 1.
Blashfield, Edwin H. 1.
Blum, Robert. 8.
Broughton, C. 1.
Cox, Kenyon. 1.
Eaton, Wyatt. 1.
Gibson, C. D. 36.
Herford, O. 1.
Johnson, C. H. 1.
Kemble, E. W., New Rochelle. 10.
Metcalf, W. L. 1.
Reinhart, C. S. 3.
Remington, Frank, New Rochelle. 1.
Remington, Frederick, New Rochelle. 2.
Rogers, W. A. 14.
Taber, W. 2.
Taylor, Chas. J. 7.

## ENGRAVINGS, ETCHINGS, PRINTS.

Bloodgood, Robert F. 3.
Calahan, James T. 1.
Chapman, Carlton T. 16.
Dielman, Fredk. 1.
Gifford, R. Swain. 6.
Johnson, Thomas. 2.
Manley, Thomas R. 7.
Mercier, Gustav. 4.
Mielatz, Chas. F. W. 21.
Moran, M. Nimmo. 12.
Mygatt, Robertson K. 10.
Nicoll, J. C. 5.
Platt, Chas. A. 17.
Smith, Sidney L. 12.
Schilling, Alexander. 27.
Sartain, Wm. 2.
Vanderhoof, Chas. A. 12.
Van Etten, Kruseman. 3.
Weir, J. Alden. 26.
Whittemore, Wm. J. 2.
Whittemore, Chas. E. 3.
Yewell, Geo. H. 2.

## WOOD ENGRAVINGS.

Aikman, Walter M., Brooklyn. 9.
Aitken, Peter. 3.
Baker, Horace. 3.
Bernstrom, Victor M., Grand View-on Hudson. 7.
Cole, Timothy. 25.
Collins, Robert C. 4.
Comstock, Mrs. Anna Botsford, Ithaca. 6.
Cooper, Edith. 4.
Davidson, Harry. 7.
Davis, John P. 7.
Del'Orme, E. H. 6.
Evans, John W., Brooklyn. 4.
Girsch, F., Mt. Vernon. 2.
Heinmann, Ernest, Ft. Wadsworth. 1.
Johnson, Thomas. 13.
Miller, William. 7.
Muller, R. A., Brooklyn. 7.
Pettit, F. A., Brooklyn. 4.
Putnam, S. G., Corona. 9.
Schladitz, E. 2.
Schlecht, Chas. 5.
Schwarzburger, C., Brooklyn. 2.
State, Charles. 2.
Sugden, Thos. D., Flushing. 1.
Sylvester, Harry E. 4.
Tietze, Richard G. 3.
Tinkey, John, Brooklyn. 5.
Wickenden, Robt. J. 1.
Wolf, Henry. 11.

ARCHITECTURE AND DECORATION. IN WATER COLOR. PEN DRAWING, SEPIA, PHOTOGRAPH, WASH DRAWING, MODEL, ETC.

Aldrich, Chester Holmes. 2.
Babb, Cook & Willard. 9.
Berg & Clark. 1.
Boring, Tilton & Malling. 2.
Brunner & Tryon. 4.
Bush-Brown, Mrs. M. Leslie, Newburg. 2.
Carrère & Hastings. 11.
Cary, George, Buffalo. 1.
Cary & Trowbridge, Buffalo. 1.
Clinton, Chas. W. 2.
Cusack, Wm. H., Poughkeepsie. 2.
Daus, R. L., Brooklyn. 1.
Fosdick, J. Wm. 1.
Fowler, Frank. 11.
Flagg, Ernest. 1.
Gibson, R. W. 1.
Green & Wicks, Buffalo. 5.
Griffin & Randall. 4.
Hamlin, A. D. 1.
Hardenburgh, H. J. 2.
Herts, Henry B. 1.
Hewlett, J. M. 1.
Hunt, Richard M. 1.
Huss, Geo. Martin. 2.
Ihnen, Henry S. 1.
Kendall, Edward H. 1.
Kent, W. W. 4.
Kimball & Thompson. 1.
Lamb & Rich. 2.
Le Brun, N., & Sons. 1.
Little & O'Conner. 1.
McDowell, Mary (Tiffany Glass Co.). 1.
McKim, Mead & White. 14.
Northrup, Agnes F., Flushing. 1.
Parfitt Brothers, Brooklyn. 2.
Price, Bruce. 3.
Reid, Robert. 4.
Robertson, R. H. 1.
Romeyn & Stever. 1.
Rossiter & Wright. 2.
Sperry, Edw. Peck (Tiffany Glass Co.). 2.
Stoughton, Arthur A. 1.
Tiffany, Louis C. 2.
Totten, Geo. O., Jr. 1.
Tubby, Wm. B. 3.
Turner, Thornton Floyd. 3.
Tuthill, Wm. Burnett. 4.
Wells, Edmund B. 1.

## LOAN COLLECTION.

### WATER COLORS.

Bourne, Mr. F. G. 1.
Clarke, Mr. Thomas B. 1.
Cordova, Miss Helene de. 1.
Evans, Mr. Wm. T. 2.
Francke, Mr. Louis J. 1.
Imlach, Miss Louise. 1.
Knapp, Mr. Sheppard. 1.
Marquand, Mr. Henry G. 2.
Scribner's Sons, Charles. 9.
Sherwood, Mrs. John H. 1.
Van Dorn, Mrs. 1.
Watson, Mr. Walter. 1.

### CHALK, CHARCOAL, PASTEL, WASH DRAWINGS, ETC.

Art Students' League. 1.
Century Company. 89.
Chase, Mr. William M. 1.
Curran, Mr. C. C. 1.
Harper & Brothers. 41.
Leslie's Weekly. 1.
Mitchell & Miller ("Life"). 20.
Schwarzman, Mr. A. 1.
Scribner's Sons, Charles. 62.
Warner, Mr. Olin L. 1.
Young Women's Christian Association. 1.

### PEN AND INK DRAWINGS, ETCHINGS, ETC.

Bishop, Mr. Heber R. 8.
Carter, Mr. Walter S., Brooklyn. 7.
Century Company. 63.
Gibson, Mr. W. C., Port Chester. 1.
Harper & Brothers. 14.
Kennedy, Mr. Edward G. 13.
Klackner, Mr. C. 2.
Mansfield, Mr. Howard. 20.
Mitchell & Miller ("Life"). 16.
Scribner's Sons, Charles. 14.
Vanderbilt, Mr. George W. 2.

### WOOD ENGRAVINGS.

Century Company. 21.
Harper & Brothers. 11.
Klackner, Mr. C. 3.
Montross, Mr. N. E. 2.

For list of paintings and sculpture from New York State sent to the women's department of the World's Fair and exhibited in the Woman's Building, see page 192.

## NON-COMPETITORS FOR AWARDS: NEW YORK.

Works by the following artists in the United States section were not examined by the board of judges. The artists whose names are marked with the * were members of the board of judges. Others in the list particularly specified when sending works that their productions were not entered for examination for awards.

### CONTRIBUTORS OF SCULPTURE.

*French, Daniel C.
*Warner, Olin L.

### CONTRIBUTORS OF OIL PAINTINGS.

Alexander, Henry.
Allen, W. S.
Amsden, Wm. T.
Baer, Wm. J.
Bell, Edward A.
Blakelock, R. A.
Blenner, Carle J.
Boston, Joseph H.
Bristol, J. B.
Brown, J. Appleton.
Brown, J. G.
Brown, Matilda.
Bush-Brown, Mrs.
Butler, Geo. B.
Buttles, Mary.
Chapman, Carleton T.
*Chase, Wm. M.
Clark, Rose.
Clark, Walter.
Clinedinst, B. W.
Coffin, Elizabeth R.
Cohen, Geo. W.
Coman, Mrs. Charlotte D.
De Forest, Lockwood.
De Haas, M. F. H.
*Dielman, Fredk.
Dillon, Julia.
Dubé, Mattie.
Dvorak, Frank.
Eaton, C. Harry.
Eaton, Chas. Warren.
Emmet, Lydia F.
Evans, Jos.
Faxon, Wm. Baily.
Fowley, Mary B. O.
Fraser, John A.
*Gifford, R. Swain.
Gill, Rosalie L.
Green, C. A.
Green, Frank Russell.
Hammer, John J.
Harris, Chas. X.
Haskell, Ida C.
Haynes, C. Coventry.
Henry, Edward L.
Herter, Albert.
Hill, Roswell S.
Irwin, Benoni.
Isham, Samuel.
Keith, Mrs. Dora Wheeler.
Ketcham, Susan M.
Koehler, Robert.
*La Farge, John.
Lamb, Ella Condie.
Lyman, Joseph.
*Maynard, Geo. Willoughby.
Miller, Chas. H.
*Millet, Frank D.
Minor, Robert C.
Moran, Edward.
Newcomb, Mrs. Marie Guise.
*Nicoll, J. C.
Raught, John William.
Rehn, F. K. M.
Rice, Wm. J.
Schilling, Alexander.
Shepley, Annie B.
Shields, Thomas W.
*Shirlaw, Walter.
Slade, Emily.
Smith, De Cost.
Smith, Henry P.
Strickler, John R.
Taggart, George.
Van Etten, Krauseman.
Van Gorder, L. S.
Wigand, A. A.
*Whittredge, W.

### WATER COLORS.

Birney, Wm. Verplanck.
Bradbury, M. R.
Chapman, Carleton T.
Curran, Charles C.
De Luce, Percival.
Eaton, C. Harry.
Eaton, Chas. Warren.
Foster, Ben.
Fraser, John A.
Gibson, W. Hamilton.
Henry, Edward L.
Mente, Charles.
*Nicoll, J. C.
Ochtman, Leonard.
Pitkin, Caroline W.
Redmond, J. J.
Rehn, F. K. M.
Satterlee, Walter.
Schilling, Alex.
Scott, Mrs. E. M.
Walton, William.

### MISCELLANEOUS DRAWINGS.

Blashfield, E. H.
Bloodgood, Robert F.
Burns, M. J.
Cox, Kenyon.
Denman, Herbert.

VIEW FROM SOUTHWEST CORNER OF ROOF OF MANUFACTURES BUILDING

Edwards, G. W.
Fraser, J. A.
Hammer, John J.
Hyde, W. H.
Kemble, E. W.
*Millet, F. D.
Parsons, Alfred.
Pennington, Harper.
Perard, V.
Robinson, Theodore.
Rogers, W. A.
*Shirlaw, Walter.
Smith, F. Hopkinson.
Taber, W.
Taylor, Charles Jay.
Tyler, Bayard H.
Van Schaick, S. W.
Wickenden, R. J.
Wiles, Irving R.
Woodward, J. D.

PASTELS.

Allan, W. R.
Binney, Martha G.
Champney, J. Wells.
*Chase, Wm. M.
Eaton, Chas. Warren.
Reynolds, Alice M.

# REPORT ON THE EXHIBIT OF THE NEW YORK STATE WORKINGMAN'S MODEL HOME.

By KATHARINE BEMENT DAVIS, Rochester, Director.

## Origin of Exhibit.

When it became certain that women were to have an important part in the management of the World's Columbian Exposition, the thought came to many women whose chief interest lay in the household that now would be the opportunity for gathering together all that art and architecture had done for beautifying the home, or science and invention for perfecting its sanitation, increasing its conveniences and improving its labor-saving devices.

If sanitary appliances could have been taken from the Anthropological Building, tapestries, art needle work and other beautiful household decorations from the Woman's Building, silver and china from the Manufactures Building, electrical inventions from the Electricity Building, food exhibits from the Agricultural Building, and all placed under one great roof, women would have stood amazed at the stupendous progress made in the last fifty years in beautifying and improving the home.

It was the anticipation of this which caused Lucy M. Salmon, professor of history at Vassar College, to turn her attention toward the possibility of having exhibited at Chicago a model house wherein all that could be gathered together of the best and most approved in plan, furnishing and household management should show to the world an ideal American home. It must always be a lasting regret to those interested in all phases of domestic economy that this admirable plan was not carried out as conceived, but the different women's boards to whom the plan was presented found its execution for various reasons impracticable.

While under discussion by the New York State Board of Women Managers the plan attracted the notice of Hon. John Boyd Thacher of the Board of General Managers of New York State and chairman of the Executive Committee on Awards. He was pleased with the idea, saw its value, and finally determined upon a modification of the proposed plan, which in his judgment would render it still more likely to accomplish good. This modification was that the house should be a *workingman's* model home. The fact was recognized that in order to attain to the highest conditions of living it is necessary not only that the workingman earn a fair wage but that he and his be educated sufficiently to distinguish between the necessary and the unnecessary, the cheap and the shoddy; that which is truly worth having from that which gives only temporary pleasure.

The exhibition of a home, where a practical illustration of right principles could be given, would have great educational value to the

masses, would prove suggestive to those engaged in practical philanthropic work, and would perhaps stimulate more general study along such lines. Secondarily, such an exhibit would be of the greatest interest to foreign visitors as an example of the possibilities of the workingman's ideal home in the United States. Mr. Thacher awakened sufficient interest among the other members of the New York State board to secure the appropriation of the funds necessary to carry out this plan. Miss Katharine B. Davis, of Rochester, N. Y., was chosen to work out the plan in its details and to take charge of the exhibit at Chicago.

### DEVELOPMENT OF EXHIBIT.

It was the 4th of March, 1893, when it was definitely decided that the house should be built. The time was all too short for what was to be done, and to this fact is largely due the incompleteness and imperfections in the working out of the scheme.

Guided by the national labor statistics as well as by observation, $500 was taken to represent the income of an industrious laborer in times when steady work could be had. The earnings were to be entirely those of the father of the family. To furnish a basis for work an imaginary family was created. Their family history was constructed with a view of illustrating in the exhibit what seemed to be vital points in the history of any family.

A young couple are engaged to be married. Both are wage-earners: he, a laboring man, making $500 a year; she, possibly a house servant, the most favorable supposition, at three dollars a week and board. If they have not others dependent on their earnings, with such an end in view each can save $100 a year. If they cannot do better than that let them wait at least two years before marrying. With $400 in cash $100 can be put away in the bank as a nest egg or against "a rainy day." With the remaining $300 their house can be completely furnished. Certainly, most young working people begin with less. We are imagining the ideal thing.

Having furnished the house and settled the young couple in it, we pass on a dozen years or so and find them, in the year of the World's Fair, 1893, settled in Chicago, living through the hardest period in a family's history — that in which there is a growing family, each too young to add to the family income. The mother, if the family is to be an ideal one, does not herself try, through this period, at least, to be a worker outside the home. If she is cook and sewing woman, nurse and manager of the family income, she is as truly *earning* as if she brought actual dollars and cents into the family treasury. For there is no real economy in a home where the children are uncared for, the house untidy, the food unpalatable and innutritious. We find them there with a family of four children, all under ten years. We will call them, for convenience, a girl of ten, a boy of eight, a girl of five, and a baby boy in the cradle. Under these conditions, if the father and mother are judicious, how will they apportion their income of $500 among the necessary items of family expense?

This consideration gives us an opportunity to illustrate three of the most vital points — the expenditure for rent, clothing and food. Here

observation and investigation, corrected by statistics, furnish a guide as to the possibilities. Mr. Carrol D. Wright, in his Sixth Annual Report (1890) on the Cost of the Production of Iron, Steel, etc., shows that in 2,490 families investigated, of various nationalities, 1,294 being American, the percentage of expenditure to income was: Rent, twelve and two-tenths per cent; clothing, eighteen and three-tenths per cent; food, thirty-nine per cent. The average income for these families was $622.14.

Mr. Edward Atkinson, in his Science of Nutrition, quoting from Mr. Wright's Report of the Bureau of Labor Statistics of Massachusetts for 1884, gives the percentage of income spent for food in families of that State, whose income is $600 or less, as from sixty-three to sixty-four per cent. The cost of clothing is practically the same throughout the country; likewise the average cost of food, since the higher price of certain articles in one locality is counterbalanced by the cheapness of others. The item of rent is that which must vary most in different localities, being, of course, much greater for the same number of rooms in the city than in towns or in the country.

As the Workingman's Home was a New York State exhibit, inquiries were carried on in the various cities of the State, and the results showed that suites of four rooms, with decent conveniences, or small detached houses, could not generally be had at less than ten dollars a month. This would be the maximum of what a workingman could pay and still have sufficient food and decent clothing. Accordingly, ten dollars a month, or $120 a year, was set aside for rent.

Statistics showed the greatest variation in the matter of expenditure for food; from thirty-nine per cent of the income among the coal and iron workers to sixty-four per cent among the Massachusetts laborers, largely factory operatives. A careful study of the food question shows that sixty-four per cent of the income spent for food is extravagantly disproportionate and unnecessary. For forty per cent of the $500 income, or for $200 a year, our supposed family can have sufficient nutritious food to satisfy not only the appetite but also all physiological requirements as shown by scientific investigation. Hence $200 was allowed for food.

A consideration of the clothing resulted in the decision that $100 properly expended would clothe the entire family neatly and comfortably.

The apportionment of income stands, therefore:

| | | |
|---|---|---|
| Income | | $500 |
| Rent, at $10 per month | $120 | |
| Clothing | 100 | |
| Food | 200 | |
| Fuel | 30 | |
| Miscellaneous | 50 | |
| Total | | 500 |

In brief, the exhibit of the New York State Workingman's Model Home undertook to answer, partially at least, the following questions:

WORKINGMAN'S MODEL HOME

*First.* How good a house can be built in the State of New York, outside of the cities of New York and Brooklyn, so as to rent for ten dollars a month?

*Second.* How completely and suitably can such a house be furnished for $300?

*Third.* How well can a family of six persons, father, mother and four children under ten years of age, be clothed on $100 per year?

*Fourth.* How much and what variety of food can the above family have for $200 a year, and can the requirements made by a scientific study of foods be met in practice for such an amount?

These questions will be taken up in order, and the manner in which they were answered will be considered.

## THE HOUSE.

"Do you not believe that the workingman should own his own home?" "Why do you not show some plan by which a man's payment of rent can apply on the purchase of his house?" "Do you believe in *renting* a house?" These were some of the questions asked each day of those in charge of the Workingman's Home.

The question of rent versus ownership is a most important one. No attempt was made in the exhibit to show how every laborer may own his own house. The various loan and building associations are endeavoring to make it possible. It means the utmost industry, care, thrift and self-denial on the part of the laborer and his family, with a chance of losing all the savings through sickness or misfortune. The courageous minority attempt it. The majority are compelled to rent. Too often, especially in the cities, the poor man pays an enormous percentage upon the value of the inconveniences he enjoys.

How good a house can a capitalist build in one of our New York cities and rent for ten dollars a month, making a fair return on his investment? The result of consultations with business men of experience was a decision that, exclusive of the land, $1,000 could be put into a house which should rent for $120 per year, the belief being that a small lot could be purchased in certain parts, or on the outskirts of our New York cities and towns at a price which would make that rent pay a fair profit on the entire investment.

Lack of time prevented the submitting of competitive designs for the house. Except for this, a more artistic one might have been secured, but hardly a more convenient one. In the emergency caused by the fact that the exposition authorities insisted that the house should be inclosed at an earlier date than had been expected, Mr. Frederick B. Pratt, a man not only widely known as secretary of the Pratt Institute, Brooklyn, N. Y., but also in connection with the comfortable housing of the poor in the city in which he lives, most generously undertook to furnish the plans and working drawings. After consultation with his architects and others, the plans used were prepared by Prof. W. S. Perry, head of the department of art at the Pratt Institute.

The house at Chicago stood in the extreme southern portion of the grounds, not far from the Anthropological Building, and directly across

from the buildings of the French agricultural colonies. In appearance it resembled hundreds of the cottages one sees scattered through New York and New England; white, with green blinds, little porch with vines and hanging baskets, window boxes of green-painted pine, and flower beds filled with inexpensive but cheery flowering plants; brown Holland shades at the windows and a white muslin curtain at the half-glass front door, to which led the graveled path.

The house had a frontage of twenty feet and a rear depth of twenty-eight feet. It would stand, therefore, on a twenty-five foot lot. The accompanying cuts are reproductions of the working drawings, giving the front and rear elevations, the floor plans and the plans for framing, followed by a "bill of material," prepared by Mr. John Coder, the builder of the house. The demand for plans by the visitors was so great that after the middle of July they were published in pamphlet form and sold at twenty-five cents a copy. A second edition was necessary.

The exterior of the house was, to say the least, commonplace. With less haste it is probable that something which would have given more pleasure to the eye could have been devised. But those interested were unwilling to sacrifice necessity or convenience for mere beauty, believing that after all fitness is the best of beauty. At the moment it seemed that something must be sacrificed in order to come within the money limit, and have that great desideratum, a bathroom. Tested by the severe test of use, fewer criticisms could be made on the arrangement of the interior than the planner had expected. In the first place, all available space was judiciously economized; then there was, considering the size of the house, ample closet room. "It is entirely unnecessary and too expensive to give a laboring man so many closets," said more than one careful builder. No housewife made this criticism. The arrangement of kitchen, pantry, sink and stove, was such as to save the steps of the housekeeper as far as possible.

Windows and doors were so placed as to afford suitable spaces for the necessary articles of furniture, and to permit easy and rapid airing of all rooms. The sitting room fireplace was an additional and most important means of securing ventilation, the only drawback being that where the cost of fuel was so important an item, it would probably have to be closed in winter when a stove would have to be used.

In the arrangement of the rooms the placing of the bathroom was a question which received considerable thought. It was finally located as in the plans, because, first, the cost of plumbing was considerably less where pipes were not carried to the second floor; and, secondly, it was not possible to put a hot water pipe into the bathtub and come within the estimated cost. The proximity of the kitchen makes it easy for the mother of the family to put her washboiler on the kitchen fire and carry the hot water in pails to the tub. Finally, its position makes it the warmest possible in winter, when the heat coming in from the kitchen, supplemented by that of a central draft lamp, would raise the temperature high enough for bathing. The bathtub itself was tin, with wooden casing. The closet was of the most approved "washout" pattern, with flush tank. The location of the kitchen sink on the oppo-

site side of the wall, was also with the view of making the plumbing bill as low as possible. Traps were of the best sort.

The stairway was made of yellow pine, posts and balustrade oiled. Many prefer varnish as a finish. It is brighter and brings out better the natural grain of the wood. The objection to it is that it shows every knock and scratch. The floors were of carefully selected and matched pine. In all the rooms of the first story the floors were painted in suitable tints not too dark. In the second story brown stain was used instead of paint in order to test the relative durability. The stain used was of the best, two coats being applied. No floors in a private house could ever get the wear that came on these floors during the five months that the house was open. The paint wore the better, looking decent long after the stain had disappeared.

The walls throughout the house were painted. The first cost of paint was considerably greater than paper, but it needs much less frequent renewal, and from a sanitary point of view is far preferable. The plastered walls should of course first receive a perfectly smooth finish. Then the paint can be wiped like the woodwork and kept perfectly free from dust, dirt and bacteria. Care should be taken not to get the walls and ceilings too dark, and colors should be selected that will harmonize well with the furnishing; a pretty tinting costs no more than an ugly one. It costs very little more to have the ceiling a few shades lighter than the walls and the effect is better.

In the sitting room the open fireplace was of the yellow Pennsylvania brick of which the chimney was also built. The basket grate burned either wood or coal.

The estimate for the house did not include the outside blinds, or screens for doors and windows. The blinds were put on at Chicago in anticipation of great heat, outside shutters which prevent the sun's rays from striking the glass being the most effectual method of keeping a small house cool. As for the screens, black mosquito netting tacked tightly to the outside of the windows costs very little and does not look badly. If the man or woman of the family has any gumption a light door frame can be made and covered with the same, for the side door at least, which will be most used by the family.

A cellar underneath the whole house was included in the estimate, nothing being allowed, however, for partitioning it into rooms or for a cement floor. The lack of a cement floor was a grave error. In most localities this would be a sanitary necessity unless the under drainage was absolutely perfect. Even then there would be the dangers from ground air which only the most careful ventilation could overcome. The entrance to the cellar was under the stairway. At Chicago, the house being situated on the sand, not far from the lake shore, the digging of a cellar was not considered practicable.

The question was asked many times, "What changes would you suggest after having lived in the house?" The changes in arrangement which seemed desirable were few.

If the two front windows on both floors were put together and a single larger, perhaps, a double window made, more convenient wall space would be given. This was particularly desirable in the bedroom, where

of necessity the head of one of the single beds projected beyond the window.

The moving of the two rear windows, on the right-hand side, two feet to the front would also be an improvement. In the kitchen, while the room would, perhaps, not look as well, it would give a direct draught across the kitchen range which would be of great help in summer in carrying off unnecessary heat. In the bedroom above it would prevent a direct breeze upon the beds, which can be put only in one place.

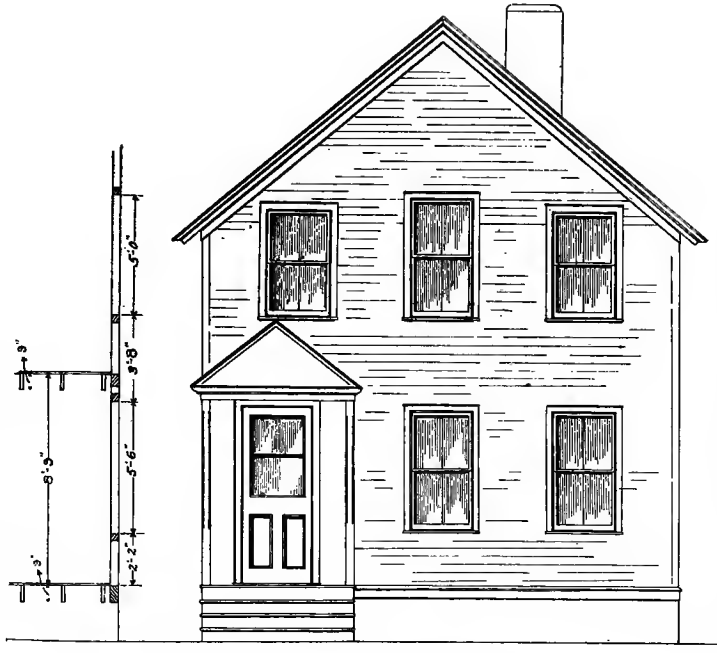
If the closet opening out of the sitting room were to exchange places with the door between that room and the kitchen, and its door open into the kitchen, it would make it more convenient for its purpose as a receptacle for out-of-door wraps, rubbers and umbrellas, being nearer the side door. It would also prevent much tracking across the sitting-room rug.

If the doorway of the half closet upstairs were moved up to the door of the front bedroom and the necessary inclosure of the stairway made, the closet would be large enough to hold a single bed and still have room enough to hang garments, or it could all be used as store-room and closet. The choice would be between utility and the appearance of the upper hall. A great addition to the convenience of the house would be a shed in the rear, which could be used as a laundry. This would not be expensive.

The building estimates have been confirmed by the erection of houses from the plans in several localities, which have come within the $1,000 limit. One built in Chicago before the close of the fair had a broad covered stoop across the entire back of the house, a door being put in place of the back kitchen window, and with this addition did not exceed $1,000. In parts of the country where lumber is cheap the house could probably be built for less.

### BILL OF MATERIAL AND LABOR.

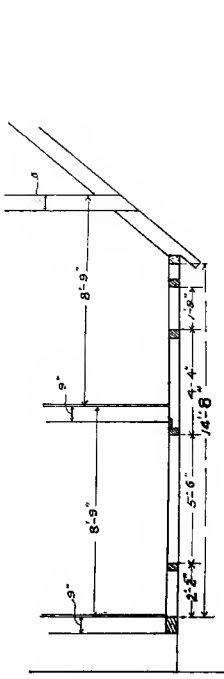
Eighty yards of excavating.
Twenty-five yards masonry.
Bill of lumber, two pieces, 6 x 8, 28 feet long, hemlock.
Bill of lumber, two pieces, 6 x 8, 20 feet long, hemlock.
Bill of lumber, one piece, 8 x 8, 28 feet long, hemlock.
Forty-two joists, 2 x 9, 20 feet long, hemlock.
Thirty-six rafters, 2 x 6, 14 feet long, hemlock.
Eighteen collar beams, 2 x 6, 16 feet long, hemlock.
Two hundred studding, 2 x 4, 16 feet long, hemlock
Sixteen hundred feet of sheathing, for lining building inside, hemlock.
Nine hundred feet of roof sheathing, hemlock.
Forty-five hundred 16-inch shingles, white pine.
Tinning.
Fourteen hundred feet of flooring, yellow pine.
Eighteen hundred feet of sheathing paper, manilla.
Four cellar window frames and sash, 1 ft. 6 in x 2 ft. 8 in., white pine.
Two thousand brick for chimneys, 2,000 feet of bevel siding, No. 1.
One front door frame and door, with trim, 2 ft. 10 in. x 6 ft. 10 in., white pine.
One back door frame and door, with trim, 2 ft. 8 in. x 6 ft. 10 in., white pine.
Five box window frames, with trim, 2 ft. 8 in. x 5 ft. 6 in. (box), white pine.
One mullion frame, 4 ft. x 5 ft. 6 in. (box), white pine.
One single frame, 1 ft. 8 in. x 5 ft. 6 in. (box), white pine.
Four window frames, 2 ft. 8 in. x 4 ft. 8 in. (box), white pine.
One window frame (box) 2 ft. 8 in. x 5 ft., white pine.

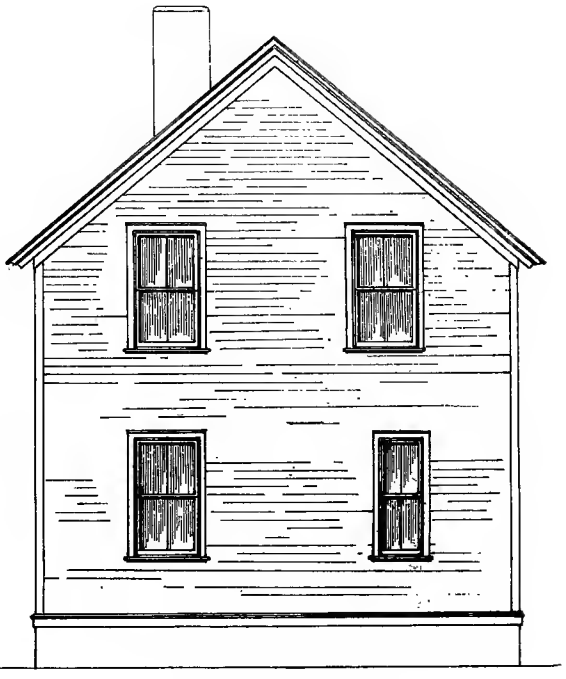



FRONT ELEVATION.

LEFT SIDE ELEVATION.

SCALE $\frac{1}{8}$"-1





RIGHT SIDE ELEVATION.

REAR ELEVATION

SCALE ⅛"-1

(The above frames to be glazed with No. 2 American glass; trim to be included.)

Three window frames, hinged, 2 ft. 8 in. x 1 ft. 9 in., white pine.

Five hundred and fifty yards of plastering.

One inside door frame with jamb and trim, 2 ft. 10 in. x 6 ft. 8 in., 1 3-8 in. thick, No. 2, white pine.

Four inside door frames, with jamb and trim, 2 ft. 6 in. x 6 ft. 8 in., 1 3-8, No. 2, white pine.

One inside door frame, with jamb and trim, 2 ft. 4 in. x 6 ft. 8 in., No. 2, white pine.

One cellar door, 2 ft. 4 in. x 6 ft. 4 in., 1 3-8, No. 2, white pine.

Five doors for second story, 2 ft. 6 in. x 6 ft. 6 in.

Four hundred feet of plain washboards, 8 inches wide, white pine.

One hundred feet of wainscoting for bathroom, yellow pine.

One stairway, three carriages, 2 x 10, 16 long, steps and risers, of yellow pine.

Bathroom complete, with tub and water closet.

Sink and kitchen, complete with drain board.

Three hundred feet of shelving of closet and kitchen pantry.

Two porch posts and rails.

Four hundred pounds of nails.

Two locks for outside doors, with night keys.

Four mortise locks, city.

Eight rim locks.

Sash locks, sash lifts, sash cord, painting, carpenter work.

## THE FURNISHING.

The house was completely furnished for $300. This included not only furniture, but bedding, linen, china and everything necessary for housekeeping. The object was to show how well this could be done upon so small a sum, and to emphasize the importance of careful estimates before any purchasing is done. Too often the young couple begin at the wrong end, and a plush set for the parlor makes a decent supply of linen impossible; too fine carpets are purchased, and the kitchen lacks those little conveniences which make the housework so much easier.

The sort of furniture selected should be suitable to the kind of house. Large pieces and startling colors are incompatible with the beauty of fitness. In the purchase of furniture durability should be one of the first considerations. It is not good economy to purchase that which is easily broken or which will soon wear out. The plainer the furniture the less labor in keeping it clean and the longer it will look well. No matter how plain the furnishing there is no reason why taste should not be used, and those things selected for the same room which will harmonize in style and color.

In planning the house at Chicago the floors, walls, woodwork, etc., were painted to harmonize with the scheme of color adopted for each room. In the sitting room, for example, the predominating colors were brown and blue. The floor was painted a medium, warm brown; the walls were cream with just a sufficient addition of red to the paint in mixing to liven it up; the ceiling was white — if it had been a lighter cream tint it would have been prettier. These colors harmonized with the yellow brick of the fireplace. Covering the center of the floor was a rug, home made. A remnant of stair carpeting, brussels, was purchased at a reduced price. Three breadths were sewn together, making a striped rug, the ends of which were finished with a golden brown worsted fringe. The coloring and the pattern of the carpet were good, the colors being shaded brown and dark blues. The same colors

predominated in the couch and table covers, the only drapery in the room.

The couch was made of a canvas-covered cot bed, the legs sawed off to make it comfortably low, and kept from sagging in the middle by a wooden brace nailed across the ends. On it was folded a comfortable; a pad made for the purpose would have been better. Over this was thrown a curtain of the sort sold as Japanese. The pillow was the ordinary bed pillow with a colored cotton cover. The cover and comfortable can be shaken out every morning and so is preferable to an upholstered lounge which collects the dust. It can of course serve as an extra bed.

The pictures were inexpensive copies, either photographs or cheap etchings, of good pictures and framed in plain wooden frames. On the hanging book shelves were a few books as the beginning of a little library. They included a Bible, Shakespeare, Uncle Tom's Cabin and a volume of Dickens. The rose bowl on the upper book shelf and the clear glass vase over the fireplace were as pretty in shape as if they had been made of cut glass, and with the two or three Japanese tea cups and other bits here and there gave the room a habitable air. The dining table was intended to be in the sitting room, though the average laborer's wife would doubtless prefer to save steps by eating in the kitchen.

In front of the windows stood the large wooden rocker, in which the man of the house could enjoy himself when the day's work was done, and the smaller sewing chair where the wife could rock the baby to sleep or darn the family stockings. Altogether the room was pretty, attractive and suitable.

Upstairs two bedrooms were furnished. In each there were two single iron bedsteads, white, with brass knobs, with excellent springs, and good, short hair mattresses. The washstands, chiffonier and chairs were of light oak. Before the beds were rugs made of single breadths of carpet, with worsted fringe at the ends.

The question arose as to whether it would be wise for a young couple to spend the money to furnish two bedrooms. This may be a matter of opinion and circumstance. If the woman has no sewing machine it would be better to try that first and then perhaps one extra single bed and whatever other furniture for the second bedroom the money allowed. But as the family begins to grow it is more and more difficult to take money for furniture, and it is good to have a comfortable supply to begin with. The two single iron beds cost more than one double wooden one. But once bought they will last a lifetime and can easily be kept clean. Single beds are much more healthful and are particularly desirable for hard-working people who need to sleep undisturbed, as the restlessness of one will not then trouble the other.

The third bedroom was unfurnished and used as a storeroom. This room could be used as a source of income by being rented to a lodger, at least while the family was small. It is unnecessary to comment on the bedding further than to say that the comfortables, supposed to have been tied by the woman herself, were made of figured turkey red calico, at five per cents per yard, were little work to make, and

were very much superior to those sold ready made at one dollar and a half.

The supply of bed and table linen was sufficient for the young housekeeper and was all of good quality. The china was of the white stone variety, but not the heavy ugly sort, and the tableware included all that was necessary to set a table neatly and comfortably. The list of kitchen utensils include all that is essential for convenient housekeeping, though the individual housekeeper might prefer to substitute other articles for some of those specified.

The only article of kitchen furniture that needs special mention is the kitchen stove or range. The whole question of heating is involved. It seemed, so far as the investigation showed, that the only thing possible in the way of heating the house was by means of stoves. Any other method was too expensive to put into the $1,000 house and too expensive to run after being put in. So with regret the decision was reached that the only thing possible for the poor man, as yet, was the regulation kitchen stove, on which they should depend not only for cooking, but, in winter, for heat as well. With regret, because if only the house could be heated cheaply enough in winter by some other method, other means of applying heat for cooking are cheaper, more convenient and rid the kitchen of half its terrors on a hot summer day.

In the house on the fair grounds gas was the most convenient fuel — oil was prohibited by the authorities — so an Aladdin oven was used with an ordinary Bunsen burner, to which a "rose burner" was attached to spread the flame. A small gas stove supplemented this for quick boiling and heating of water. By these means all the cooking was satisfactorily done with little rise of temperature in the kitchen. In using the Aladdin oven with gas the heat was so regulated as to equal that furnished by the oil lamp ordinarily used. The house was supposed to be lighted by oil lamps, but, for the reason mentioned above, it was necessary to put in gas at Chicago.

The cost of fuel depends so largely on locality that further investigation would be necessary before a fair average could be given. From available statistics, and a series of experiments made in weighing the coal used by an economical housekeeper, thirty dollars, at the price paid for coal and oil during the past two winters, was thought to be a fair estimate for fuel and lights if only the kitchen range were used. This would mean cold bedrooms, but if the mother uses hot flat-irons to take off the chill from the bedding, dressing and undressing the children by the fire, and wrapping them up for the journey through the hall, the cold bedrooms will not hurt them if they are healthy.

The furniture and most of the furnishings were purchased at various stores in Brooklyn, N. Y. They were bought at the regular retail prices, just as any woman would buy, no discounts being asked for. The accompanying lists, which, during the fair, were posted in the various rooms, show the prices paid for each article.

Individual taste or judgment might modify the proportions paid for the different items. This only attempts to show *one* way in which a house can be furnished for $300 :

### SITTING ROOM FURNITURE.

| | | |
|---|---|---|
| Six cane-seated chairs | | $6 00 |
| Sewing chair | | 98 |
| Large rocker | | 3 00 |
| Stand | | 1 65 |
| Dining table | | 6 00 |
| Book shelves | | 1 00 |
| Rug : | | |
| Six and three-quarters yards carpet, at 65 cents | $4 38 3-4 | |
| Four and one-half yards fringe, at 15 cents | 67 1-2 | |
| | | 5 06 |
| Couch : | | |
| Cot | $1 50 | |
| Cover | 3 75 | |
| | | 5 25 |
| Pictures, with frames | | 5 59 |
| Books | | 5 80 |
| Bric-a-brac | | 3 00 |
| Clock | | 2 50 |
| Table cover | | 2 00 |
| Total | | $47 83 |

### FRONT BEDROOM.

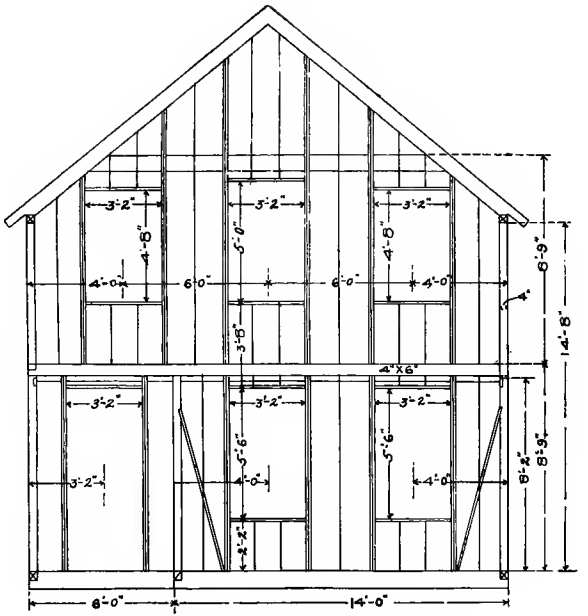
| | |
|---|---|
| Two single iron beds, at $7.50 | $15 00 |
| Two sets woven wire springs, at $3.50 | 7 00 |
| Two short-hair mattresses, at $5 | 10 00 |
| Washstand | 3 00 |
| Chiffonier | 8 00 |
| Two cane-seated chairs, at $1 | 2 00 |
| Two rugs | 2 67 |
| Glass | 1 75 |
| Chamber set (six pieces) | 3 15 |
| Total | $52 57 |

### BACK BEDROOM FURNITURE.

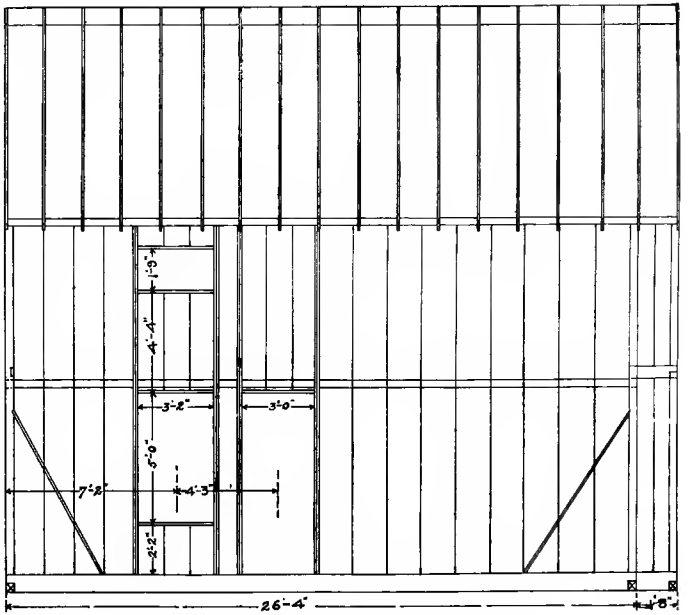
| | |
|---|---|
| Two single iron beds, at $7.50 | $15 00 |
| Two sets woven wire springs, at $3.50 | 7 00 |
| Two short-hair mattresses, at $5 | 10 00 |
| Washstand | 3 00 |
| Glass | 90 |
| Three cane-seated chairs, at $1 | 3 00 |
| Rug | 1 33 |
| Chamber set (six pieces) | 3 15 |
| Total | $43 38 |

### HOUSE LINEN.

| | |
|---|---|
| Sixteen sheets, 40 yards cotton, at 18 cents | $7 20 |
| Twelve pillow cases, 12 yards cotton, at 16 cents | 1 92 |
| Four table cloths, 10 yards, at 75 cents | 7 50 |
| One dozen table napkins | 1 50 |
| One-half dozen roller towels, 12 yards, at 15 cents | 1 80 |
| One half dozen dish towels, 6 yards, at 5 cents | 30 |
| One dozen hand towels | 2 00 |
| One-half dozen doilies | 38 |
| Four china towels, 4 yards, at 12 1-2 cents | 50 |
| Total | $23 10 |

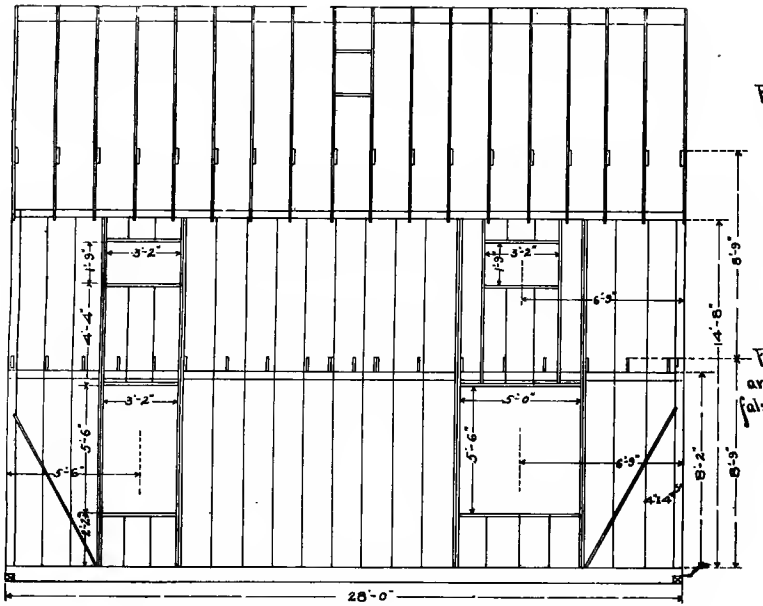



FRAMING - FRONT ELEVATION.

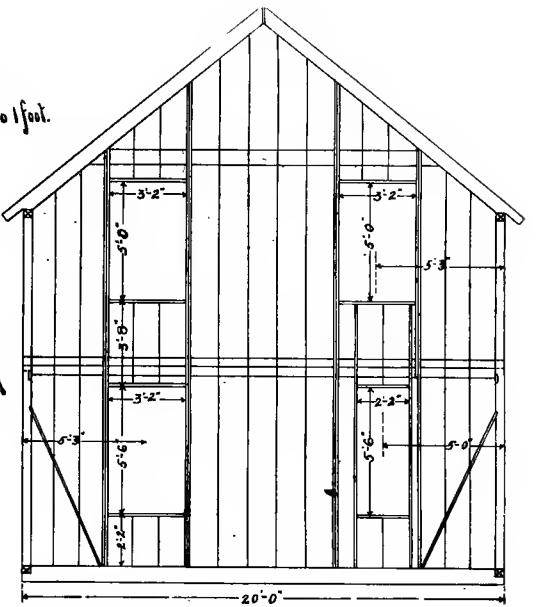



FRAMING - LEFT SIDE ELEVATION.

SCALE $\frac{1}{8}$"=1




FRAMING - RIGHT SIDE ELEVATION.




FRAMING - REAR ELEVATION.

SCALE $\frac{1}{8}$"-1

### BEDDING.

| | | |
|---|---|---|
| Three pairs blankets, at $4 | | $12 00 |
| Five pillows, at $1.50 | | 7 50 |
| Four bed spreads, at 75 cents | | 3 00 |
| Five comfortables (home made), at 95 cents | | 4 75 |
| Total | | $27 25 |

### KITCHEN FURNITURE.

| | | |
|---|---|---|
| Three chairs, at 50 cents | | $1 50 |
| Kitchen table | | 1 50 |
| Stove (Boynton Stove Co., New York) | | 20 00 |
| or Aladdin oven, complete | $28 00 | |
| and small oil stove for quick boiling | 3 00 | |
| | $31 00 | |
| Kitchen utensils (see list) | | 32 43 |
| Table ware | | 25 91 |
| Total | | $81 34 |

### TABLE WARE.

| | |
|---|---|
| One dozen dinner plates | $1 10 |
| One dozen tea plates | 1 00 |
| One-half dozen soup plates | 50 |
| One dozen coffee cups and saucers | 1 38 |
| One-half dozen tea cups and saucers | 54 |
| Two platters, 22 cents, 34 cents | 56 |
| Two covered vegetable dishes | 1 40 |
| Three oval vegetable dishes | 71 |
| One dozen sauce plates | 68 |
| Fruit dish | 35 |
| One dozen butter plates | 40 |
| Four salts and peppers | 20 |
| Two milk pitchers, 18 cents, 25 cents | 43 |
| One small pitcher | 12 |
| One sugar bowl | 40 |
| One water pitcher | 40 |
| One-half dozen oatmeal bowls | 36 |
| One dozen tumblers | 50 |
| One spoon holder | 10 |
| Syrup jug | 30 |
| Vinegar cruet | 30 |
| One-half dozen steel table knives | 1 32 |
| One-half dozen plated table knives | 1 47 |
| One dozen plated table forks | 3 96 |
| One carving knife and fork | 1 49 |
| Two dozen plated tea spoons, at $1.98 | 3 96 |
| One-half dozen plated table spoons | 1 98 |
| Total | $25 91 |

### KITCHEN UTENSILS.

| | |
|---|---|
| Bread box | $1 50 |
| Bread board | 50 |
| Bread knife | 25 |
| Bread tins (oblong, 4) | 36 |
| Bread pans | 47 |
| Broiler (medium size) | 19 |
| Biscuit cutter | 03 |
| Brooms (medium size, 2) | 50 |
| Candlestick | 09 |

| | |
|---|---|
| Chopping bowl | $0 28 |
| Chopping knife | 25 |
| Chamber pail | 35 |
| Clothes basket (medium size) | 75 |
| Clothes hamper | 85 |
| Clothes line, 75 feet | 25 |
| Clothes pins, 5 dozen | 05 |
| Clothes bars | 75 |
| Clothes wringer | 4 50 |
| Coal shovels (2, large and small) | 1 15 |
| Coffee can | 25 |
| Coffee pot | 45 |
| Coffee pot stand, wire | 12 |
| Cook's fork | 09 |
| Cups, agate (two sizes) | 24 |
| Dipper | 10 |
| Dish pan | 48 |
| Dripping pan | 50 |
| Dust pan | 07 |
| Door mat | 60 |
| Frying pan | 40 |
| Flatirons (3) | 75 |
| Flatiron stand | 05 |
| Gem pan, iron | 35 |
| Griddle, iron | 36 |
| Hammer | 25 |
| Ironing board (medium size) | 65 |
| Jar, earthen (for beans) | 45 |
| Kettles (2 sizes, iron) | 1 00 |
| Lamps (3) | 3 00 |
| Mop handle | 21 |
| Match box | 03 |
| Oil can (medium size) | 32 |
| Pancake turner | 07 |
| Pie plates (2) | 10 |
| Poker | 10 |
| Potato masher | 10 |
| Pails (1 wooden, 1 paper) | 40 |
| Roller, kitchen | 50 |
| Rolling pin | 10 |
| Sugar box | 1 00 |
| Sauce pans (2 sizes) | 1 38 |
| Strainer | 20 |
| Scoops (2), tin | 06 |
| Scrub brush | 10 |
| Skimmer | 05 |
| Soap dish | 10 |
| Tin spoons (2) | 20 |
| Wooden spoon | 05 |
| Tea can | 25 |
| Teapot | 39 |
| Teakettle | 75 |
| Tub | 90 |
| Washbasin, agate | 44 |
| Washboard | 50 |
| Washboiler | 90 |
| Total | $32 43 |

SUMMARY OF HOUSE FURNISHING.

| | |
|---|---|
| Furniture | $138 84 |
| Linen | 23 10 |
| Bedding | 27 25 |
| Table ware | 25 91 |
| Rugs | 9 06 |

| | |
|---|---|
| Window shades and hall curtain | $15 90 |
| Kitchen utensils | 32 43 |
| Pictures | 5 59 |
| Books | 5 80 |
| Bric-a-brac | 3 00 |
| Clock | 2 50 |
| Table cover | 2 00 |
| Total | $291 38 |

## THE CLOTHING.

In the report on the cost of the production of iron and steel Mr. Wright shows that in the 2,490 families investigated eighteen and three-tenths per cent of the income is spent for clothing. As he gives the amount expended for the man, the woman and the children separately, it is easily calculated that of the total expenditure the husband gets thirty-one per cent, the wife twenty-one per cent, and the children forty-seven per cent, omitting fractions. The amount spent by the husband is disproportionately large compared with that spent by the wife.

In our exhibit we set aside $100, or twenty per cent of the income, as the sum to be spent annually for clothing, and the expenditure was in the following proportions: Man. twenty-nine per cent; woman, twenty-seven per cent; children, forty-four per cent. The mother of a family is too often prone to sacrifice her own comfort, and the family too apt to take it as a matter of course, where clothes are concerned. It is poor economy for her to wear thin flannels or none at all, a light coat in the winter and no rubbers in the rain, that the children may make a better appearance on Sunday. Our apportionment aims at doing away with this injustice.

Before attempting to itemize the expenses in this line, women in various stations in life, as school teachers, clerks, servant girls and washwomen, were asked to furnish as complete lists as possible of what they considered necessary for a year's supply of clothes for themselves and families. They were also asked as to the length of time the different garments were worn. Of course, judgment in buying, quality of goods purchased, taste and ability in making, and care in mending and remaking, are the qualities which make it possible to dress neatly on a very small sum. These will vary with the individual and her training, and it is sad to know that those who need it most are too apt to be those who possess the least ability to make a little go a good way.

The criticisms made by visitors during the fair leave the matter about where it was in the beginning, so far as confirming the judgment of those planning the exhibit is concerned. "Three pairs of shoes a year is altogether more than is necessary," says one. "I can wear one pair for a year." "So can I," replies the exhibitor;" "but just this moment a lady told me that she wore out a pair a month, and that the estimate was altogether too low." And so it was through all the articles on the lists. The women in poorer circumstances, who criticised generally, considered it possible to do with less.

Many families of laboring men depend largely on the cast-off clothing

of those in better circumstances for the clothing of the children. But this is something that cannot be counted upon in such an estimate as this.

We suppose that the mother does the family sewing. The man's clothes and the boy's coats and pants are purchased ready made. In selecting great attention must be paid to durability of material and to good color. In buying dress goods the economical woman will select material that will turn, and, if possible, that which has no up or down. Even in woolen goods, that which will wash must be selected, for skill in making over is money in the pocket, and this cannot be done where colors fade and clothing will not bear a wetting.

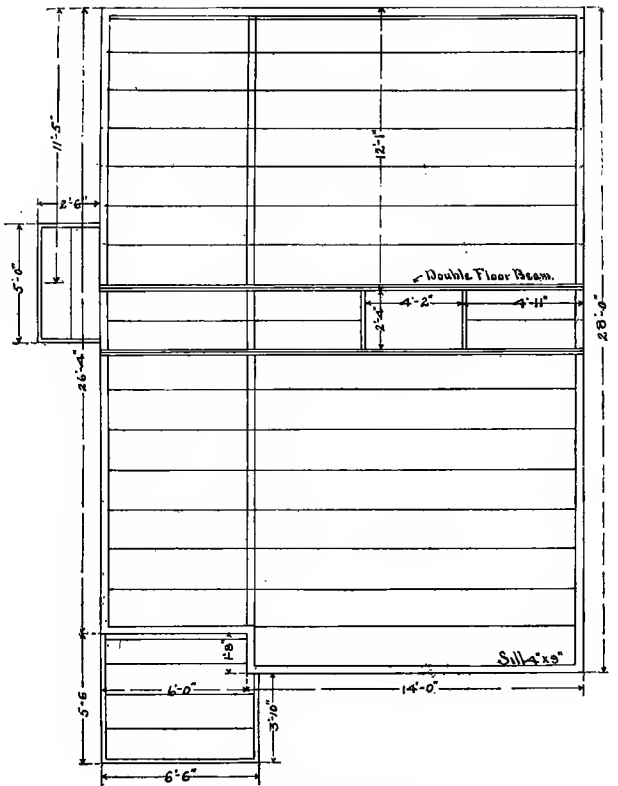
Much of the little girls' clothing can be made from the mother's, and it is better economy to pay more in the beginning and then make over, than it is to get cheap, slazy material for both mother and daughters, that never looks well after the *new* is off. This was illustrated in the clothing on exhibition at the fair, where some of the children's dresses were made of cloth that had been worn steadily for several years, washed and turned, before it was again washed to make the child's dress. Plainness and simplicity in style also add to neatness of appearance and length of wear. It is needless to speak of the "stitch in time" on which will depend the garment's length of days.

The baby clothes were an attempt to show how good an outfit could be had for ten dollars. For the second baby the expenditure would probably be little as the clothes of the first ought to be in good condition. The baby's clothes after being put into short dresses would not cost as much as the first outfit, since they could be largely made from outgrown garments. The clothes were very simple. The slips and nightgowns measured thirty inches from neck to hem and were untrimmed except for a narrow edging around the neck. The underclothing, skirt and pinning blanket were made after the Jenness-Miller patterns, showing the greater comfort of the garments which hang from the shoulders.

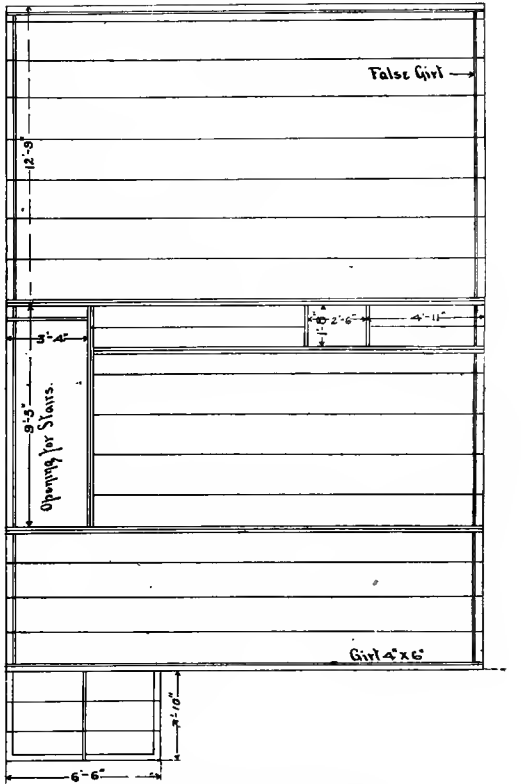
At Chicago the family clothing was distributed in its proper places, the underclothing laid away in the bureau drawers and the dress coats and trousers hung in the closets. Each article had a card attached on which the cost was plainly marked. In the case of home-made garments the quantity of cloth used was also given. On the walls were posted itemized lists of the clothing for each member of the family. All was open to the public for examination, and it was a daily sight to see the front bedroom filled with women standing and sitting around the open bureau, examining and criticising the articles and comparing domestic experiences, with profit, it is to be hoped.

How to make a little go a good way; this is something it were well to teach the young girls growing up to take their places as mothers of families, since, lament it as we may, the fact remains that for great masses of people comfort in the home, including neatness of dress, can be had only by the most careful thought and the greatest painstaking.

The following lists give the results of the studies made:

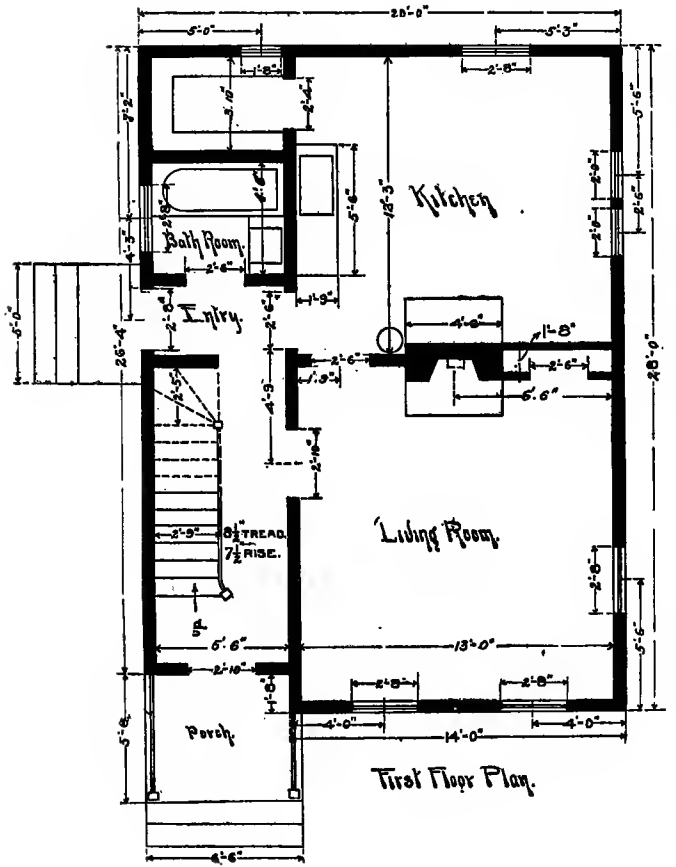



FRAMING - FIRST FLOOR PLAN.

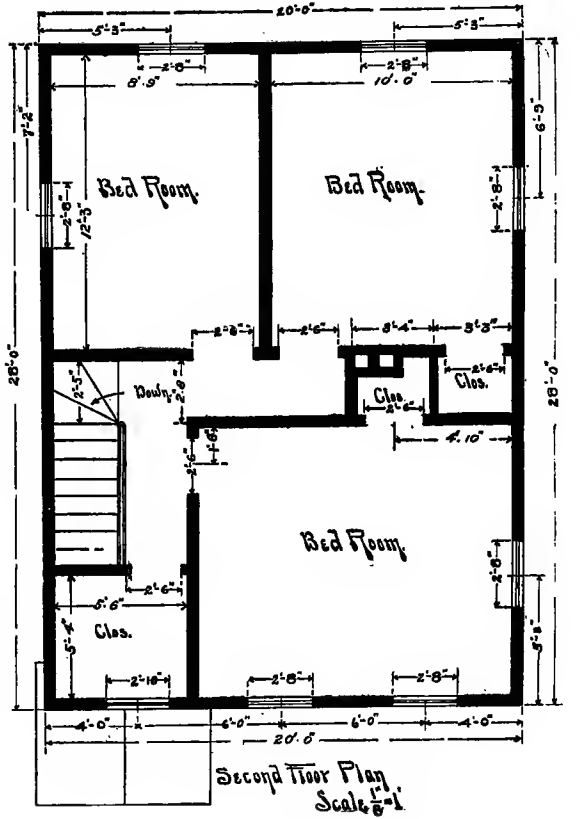



FRAMING - SECOND FLOOR PLAN

SCALE $\frac{1}{8}$"=1'




First Floor Plan.




Second Floor Plan
Scale $\frac{1}{8}$"=1'

| Article. | Cost. | No. yrs. worn. | Average for 1 year. |
|---|---|---|---|
| **CLOTHING FOR MAN.** | | | |
| Overcoat | $11 00 | 3 | $3 66⅔ |
| Best suit | 10 00 | 2 | 5 00 |
| Overalls | 85 | 1 | 85 |
| Jumper | 80 | 1 | 80 |
| White shirts (2) | 1 10 | 2 | 55 |
| Two white collars | 26 | 2 | 13 |
| Two pairs white cuffs | 50 | 2 | 25 |
| Suspenders | 25 | 1 | 25 |
| Blue flannel shirts (2) | 2 50 | 2 | 1 25 |
| Shoes (3 pair) | 9 00 | 1 | 9 00 |
| Stockings (3 pair) | 75 | 1 | 75 |
| Under vests and drawers | 2 00 | 2 | 1 00 |
| Cardigan jacket | 2 50 | 3 | 83 |
| Working pants | 2 00 | 1 | 2 00 |
| Hat | 2 00 | 2 | 1 00 |
| Straw hat | 25 | 1 | 25 |
| Necktie | 25 | 2 | 13 |
| Handkerchiefs (12) | 1 50 | 3 | 50 |
| Shirts (outing flannel) | 1 00 | 1 | 1 00 |
| Total for one year | | | $29 21 |

| | | | | |
|---|---|---|---|---|
| **CLOTHING FOR WOMAN.** | | | | |
| One cloth summer dress: | | | | |
| Four yards serge, at $1 | $4 00 | | | |
| Five yards cambric, at 6 cents | 30 | | | |
| Three-fourths yard drilling, at 15 cents | 12 | | | |
| Three-eighths yard velvetine | 36 | | | |
| One spool silk | 09 | | | |
| One spool thread | 04 | | | |
| Hooks and eyes | 05 | | | |
| | | $4 96 | 3 | $1 66 |
| One cloth winter dress: | | | | |
| Five yards flannel, at 79 cents | $3 95 | | | |
| Findings as above | 99 | | | |
| | | 4 94 | 3 | 1 65 |
| Two calico dresses: | | | | |
| Twenty yards calico, at 8 cents | $1 60 | | | |
| Two yards cambric, at 15 cents | 30 | | | |
| Two spools thread | 08 | | | |
| Hooks and eyes | 08 | | | |
| Buttons | 05 | | | |
| | | 2 11 | 2 | 1 05 |
| Two seersucker dresses: | | | | |
| Twenty yards seersucker, at 12 1-2 cents | $2 50 | | | |
| Findings | 51 | | | |
| | | 3 01 | 3 | 1 00 |
| Two suits under flannel, at $1.50 | | 3 00 | 2 | 1 50 |
| One flannel skirt | | 1 55 | 5 | 31 |
| One winter cloak | | 8 50 | 3 | 2 83 |
| One summer coat | | 5 90 | 3 | 1 97 |
| Two seersucker summer skirts | | 1 04 | 5 | 21 |
| Two white aprons | | 54 | 3 | 18 |
| Four gingham aprons | | 88 | 2 | 44 |
| Four night dresses | | 3 08 | 4 | 77 |
| Four corset waists | | 92 | 4 | 23 |
| Four combination undersuits | | 1 76 | 4 | 44 |
| Three pairs shoes, at $3.50, $2 50 and $2 | | 8 00 | 1 | 8 00 |
| One pair rubbers | | 60 | 1 | 60 |
| One umbrella | | 1 75 | 3 | 58 |
| One dozen handkerchiefs | | 1 20 | 3 | 40 |
| Two pairs gloves — kid, 63 cents; cotton, 37 cents | | 1 00 | 2 | 50 |
| One pair mittens | | 25 | 2 | 13 |

| Article. | | Cost. | No. yrs. worn. | Average for 1 year. |
|---|---|---|---|---|
| One rubber coat | | $3 00 | 5 | $0 60 |
| Two pair winter stockings | | 1 00 | 2 | 50 |
| Three pair summer stockings | | 75 | 2 | 38 |
| Garters | | 15 | 2 | 08 |
| Winter hat | | 1 75 | 2 | 88 |
| Summer hat | | 75 | 2 | 38 |
| One shirt waist: | | | | |
| Three yards cloth, at 17 cents | $0 51 | | | |
| Buttons | 08 | | | |
| Thread | 04 | | | |
| | | 63 | 2 | 32 |
| Total for one year | | | | $27 59 |

CLOTHING FOR GIRL OF TEN YEARS.

| | | | | |
|---|---|---|---|---|
| One woolen summer dress | | $2 00 | 2 | $1 00 |
| Two gingham dresses | | 1 36 | 2 | 68 |
| One cambric dress | | 73 | 2 | 36 |
| One woolen winter dress | | 2 00 | 2 | 1 00 |
| Two suits of under flannel | | 3 00 | 2 | 1 50 |
| Three night dresses | | 1 32 | 2 | 66 |
| Three under waists | | 54 | 2 | 27 |
| Three combination undergarments | | 96 | 2 | 48 |
| One flannel skirt | | 1 13 | 3 | 38 |
| Two seersucker summer skirts | | 60 | 3 | 20 |
| One winter cloak | | 7 00 | 2 | 3 50 |
| One spring coat | | 2 00 | 2 | 1 00 |
| One winter hat | | 1 00 | 2 | 50 |
| One summer hat | | 84 | 2 | 42 |
| Two pair shoes | | 3 00 | 1 | 3 00 |
| One pair mittens | | 25 | 1 | 25 |
| Three gingham aprons | | 1 35 | 3 | 45 |
| Two white aprons | | 32 | 2 | 16 |
| Two pairs woolen stockings | | 1 00 | 2 | 50 |
| Two pairs cotton stockings | | 58 | 2 | 29 |
| Total for one year | | | | $16 60 |

CLOTHING FOR BOY OF EIGHT YEARS.

| | | | | |
|---|---|---|---|---|
| Overcoat | | $4 00 | 2 | $2 00 |
| Best suit (worn for common next year) | | 4 00 | | 4 00 |
| Extra pants | | 1 00 | 1 | 1 00 |
| Flannel shirts (2) | | 2 00 | 2 | 1 00 |
| Seersucker shirts (4) | | 1 64 | 2 | 82 |
| Under flannels (2 suits) | | 3 00 | 2 | 1 50 |
| Caps (corduroy) | | 75 | 2 | 38 |
| Straw hat | | 50 | 1 | 50 |
| Mittens | | 25 | 1 | 25 |
| Rubbers | | 50 | 1 | 50 |
| Shoes (3 pair) | | 3 75 | 1 | 3 75 |
| Night drawers (2) | | 56 | 2 | 28 |
| Total for one year | | | | $15 98 |

CLOTHING FOR GIRL OF FIVE YEARS.

| | | | | |
|---|---|---|---|---|
| Shoes (2 pair) | | 2 50 | 1 | 2 50 |
| Winter hat | | 1 00 | 2 | 50 |
| Summer hat | | 84 | 2 | 42 |
| Mittens | | 25 | 1 | 25 |
| Total for one year | | | | $3 67 |

Other garments are those outgrown by older sister, or made over from mother's clothes.

| BABY CLOTHES. | | Cost. |
|---|---|---|
| One dozen new diapers | | $0 96 |
| One dozen old diapers | | |
| Six slips, at 22 1-3 cents each: | | |
| Five and one-half yards cambric, at 11 cents | $0 61 | |
| Seven and one-half yards edging, at 8 cents | 60 | |
| One dozen buttons, at 5 cents | 05 | |
| Two spools cotton, at 4 cents | 08 | |
| | | 1 34 |
| Three night gowns, at 17 cents each | | 51 |
| Two pinning blankets | | 1 28 |
| Two woolen shirts, at 60 cents | | 1 20 |
| Two pair socks, at 23 cents | | 46 |
| Two skirts, 3 yards flannel, at 37 1-2 cents | | 1 14 |
| Two outing flannel sacques, 1 1-2 yards, at 12 1-2 cents | | 16 |
| Three bands, 1-2 yard flannel | | 20 |
| One flannel wrapper, 2 3-4 yards, at 12 1-2 cents | | 35 |
| One cap | | 28 |
| Cloak, 2 1-2 yards flannel, at 69 cents | $1 73 | |
| One yard ribbon | 13 | |
| One spool silk | 09 | |
| | | 1 95 |
| Total | | $9 83 |

| SUMMARY OF CLOTHING FOR FAMILY. | Cost for 1 year. |
|---|---|
| Man | $29 21 |
| Woman | 27 59 |
| Girl of ten years | 16 60 |
| Boy of eight years | 15 98 |
| Girl of five years | 3 67 |
| Baby | 9 83 |
| | $102 88 |

## THE FOOD.

The objects of the food experiment were twofold; first, to show that for $200 a year, or an average of fifty-five cents a day, five persons could be so well fed as to satisfy their appetites by the quality and variety of food and to keep them in sound health and good working condition; second, to see how closely practice would verify the theory by first preparing a series of bills of fare, in accordance with the standards laid down by our scientific workers in food economics, and then testing by putting them in use with a real family and noting results.

The work of physiologists, chemists and statisticians on the food problem in Germany, England and America has been summed up into certain so-called "standards" of food, varying for different nationalities, ages and conditions. These standards show roughly what is the conclusion up to date as to the quantity of food necessary to sustain life or to keep a man in good working condition, and in what proportion the different food principles should be represented in his daily ration. The standards are based upon experiment and observation, and will, probably, be modified by further research.

To make the food experiment tried at Chicago intelligible to the general reader, a few brief preliminary statements in explanation of the terms used in the standards may not be out of place.

The five food principles are water, salts, proteids, fats and carbohydrates. In a ration in which the three last principles are in proper proportions the two first will generally take care of themselves. The proteids are those constituents of our food which are composed chemically of nitrogen, oxygen, hydrogen, sulphur and phosphorus. They occur in white of egg, lean of meat, and in smaller quantities in grain and vegetables. They make new tissues, muscles, tendons, etc. The fats contain no nitrogen, being complex compounds of carbon, hydrogen and oxygen. They are found in fat meats, butter, milk, etc. They form the fatty tissues. The carbohydrates, which are found chiefly as starch and sugar, occur most abundantly in grains and vegetables. They can be transformed into fat, but their principal use is as fuel, for which purpose all three can serve and thus yield energy in the form of heat and muscular strength.

The term calorie has been adopted as the unit, not only of heat in general physics, but also in the study of foods. So used, it is the unit of heat or energy producing power of our food. It is equal to the amount of heat necessary to raise the temperature of one kilogram of water one degree centigrade.

Voit's daily standard for the German laborer is:

Man at hard work.— Proteids, 145 grams; fats, 100 grams; carbohydrates, 450 grams; calories, 3,370.

Man at moderate work.— Proteids, 118 grams; fats, 56 grams; carbohydrates, 500 grams; calories, 3,055.

Prof. Wm. O. Atwater's standard, modified for the American laborer, is:

Man at hard work.— Proteids, 150 grams; fats, 150 grams; carbohydrates, 500 grams; calories, 4,060.

Man at moderate work.— Proteids, 125 grams; fats, 125 grams; carbohydrates, 450 grams; calories, 3,520.

The American laborer demands and habitually consumes more food than the European working man, the excess being largely fat.

It is believed that one cannot, for any length of time, fall below these standards and still be sufficiently well nourished to do efficient work. It is also believed that any great constant variation in the relative proportions of the food principles used, will, in the end, prove disastrous to health, taking into consideration what is now known and practiced in the art of preparing food. There is very little to be gained by telling the average woman, poor or otherwise, "You must feed your family daily so many grams of proteids, etc., if you wish them to be well nourished." More information and different must be given if the masses are to profit by studies already made.*

König and others furnish us tables in which are given the analyses of almost every article of food in common use, showing the relative proportions of the food principles in the raw material. With the aid of the American standard and these tables, it is not difficult to construct

* To spread this information has been the work of such investigators, lecturers and writers as Prof. Wm. O. Atwater, Mrs. Ellen H. Richards and Mrs. Mary Hinnman Abel, and such also is the object of the New England kitchens and of such educational institutions as the Pratt and the Drexel institutes, where domestic science and economics is an important course.

CHILDREN'S BUILDING

bills of fare which shall give us the proper quantity of food and in proper proportions. Such bills of fare, especially if accompanied by appropriate recipes, giving quantities and amounts, can, of course, be understood and acted upon by any housewife who can read.

As our bills of fare were to be used in a special case, they were constructed to meet the needs of our theoretic family. Mr. Carrol D. Wright's arbitrary method of estimating the size of a family was employed.

According to this, man equals 100 units; woman equals 90 units; child of 10 equals 75 units; child of 8 equals 75 units; child of 5 equals 40 units; total, 380 units. In other words, the consuming power of this family was equal to three and eight-tenths men. Assuming the man to be a laborer at moderate work, the required quantities of the three food principles necessary for one day's rations, expressed in ounces, will be, proteids, 16.8; fats, 16.8; carbohydrates, 60.3; calories, 13,376.

If, however, we use the American standard as given for man, woman and children separately, we will have, proteids, 15.8; fats, 10.7; carbohydrates, 62.3.

The bills of fare as planned, furnished for fifty-five cents a day proteids and carbohydrates equal to the maximum in the estimates given above, and fats in excess of the minimum. The cost was based upon the retail prices in Brooklyn, N. Y., in the spring of 1893. The prices are shown in the accompanying table:

MARKET PRICES, BROOKLYN, N. Y., APRIL, 1893.

FOOD PURCHASED AT RETAIL.

| Article. | How purchased. | Price per pound. |
|---|---|---|
| Beef (shoulder or leg) | By the pound, 8 cents to 10 cents | $0.08 |
| Corned beef | By the pound, 8 cents to 10 cents | .10 |
| Liver (cow's) | By the pound | .08 |
| Beef heart | Each, 10 cents to 15 cents | average .056 |
| Mutton (breast and neck) | By the pound | .06 |
| Bacon | By the pound | .17 |
| Salt pork | By the pound | .15 |
| Codfish (salt) | By the pound | .14 |
| Herring (dried) | By the pound | .10 |
| Butter | By the pound | .25 |
| Whole milk | By the quart, 6 cents | .028 |
| Skimmed milk | By the quart, 3 cents | .014 |
| Eggs | By the dozen, 15 for 25 cents | .150 |
| Eggs | By the dozen, later, 12 cents | .091 |
| Cheese | Per pound | .18 |
| Flour | By the sack, 24 1-2 pounds for 65 cents | .026 |
| Oatmeal | By the pound | .04 |
| Rice | By the pound, 3 1-2 pounds for 25 cents | .071 |
| Hominy | By the pound, 5 pounds for 18 cents | .036 |
| Corn meal | By the pound | .03 |
| Potatoes (old) | By the bushel, 70 cents | .0116 |
| Cabbage | By the head, 10 cents (about 3 pounds) | about .033 |
| Dried peas | By the quart, 8 cents | .042 |
| Dried beans | By the quart, 10 cents | .053 |
| Onions | By the pound | .04 |
| Beets | By the peck, 20 cents (about 17 pounds) | about .011 |
| Dried apples | By the pound, 3 pounds for 25 cents | .083 |
| Dried prunes | By the pound | .10 |
| Sugar | By the pound, 7 pounds for 36 cents | .051 |
| Macaroni | By the pound | .12 |

It is supposed that the woman buys in small quantities, flour by the small sack, potatoes by the peck, etc. The bread used is entirely home-made, a pound of flour making a loaf of about a pound and a quarter, which will furnish more nutriment than the five-cent baker's loaf.

The meats used are the cheaper cuts prepared by long, slow cooking. Very little butter enters into the bills of fare, the fats being supplied chiefly by fat meats. Salt pork and bacon are used largely for this purpose. It is difficult to supply a proper amount of fat on so small an outlay of money to a family who do not relish fat of beef or mutton. Many persons object to the use of pork, but for a healthy person engaged in some active occupation there seems to be no valid objection, provided the pork used is not diseased and that it is properly cooked. Skim milk is largely used since the fat is otherwise supplied. Corn meal and beans are a most valuable part of the diet. Coffee and tea seldom appear. They are simply a luxury and contain no nutriment. Coffee for breakfast could be added to any bill of fare not containing it for about five cents extra.

A greater variety than that which appears could be secured by the use of more made dishes. The aim was to put the bills of fare within the reach of those who had time or ability only for the simplest dishes.

The following are the bills of fare as originally prepared:

## No. I.

*Breakfast.*— Milk toast; Boston baked beans: coffee with milk and sugar.

*Dinner.*— Brown fricassee of beef; scalloped potatoes; boiled onions; bread; hominy with sugar syrup.

*Supper.*— Fried bacon; bread and butter.

*Analysis.*

| ARTICLE | Pounds. | Proteids. Ounces. | Fats. Ounces. | Carbohydrates. Ounces. | Calories. | Price. |
|---|---|---|---|---|---|---|
| Flour | 2 7-8 | 5.52 | .92 | 31.74 | 4,772.5 | $0.071 |
| Butter | 1-4 | .072 | 6.228 | . ... | 791 | .0625 |
| Milk | 2 | .992 | .224 | 1.536 | 350 | .03 |
| Beans | 1 | 3.71 | .336 | 9.184 | 1,585 | .07 |
| Beef | 1 1-2 | 3.984 | .777 | ..... | 1,335 | .09 |
| Pork | 1-8 | .06 | 1.56 | ..... | 410 | .01 |
| Bacon | 1-2 | .8 | 5.6 | ..... | 2,960 | .06 |
| Potatoes | 2 | .64 | ..... | 6.72 | 790 | .05 |
| Onions | 1-2 | .144 | .032 | .568 | 560 | .025 |
| Hominy | 1-2 | 1.12 | .56 | 5.064 | 816.5 | .0225 |
| Sugar | 1-4 | ..... | ..... | 3.86 | 450 | .0125 |
| Coffee | 1-8 | ..... | ..... | ..... | ..... | .06 |
| Total | 11 5-8 | 17.042 | 16.237 | 58.672 | 14,820 | $0.5635 |

## No. II.

*Breakfast.*— Salt pork fried in batter; bread; whole milk.

*Dinner.*— Stewed mutton with rice; boiled potatoes; pea soup; bread.

*Supper.*— Corn meal griddle cakes; minced beef with gravy.

*Analysis.*

| ARTICLE. | Pounds. | Proteids. Ounces. | Fats. Ounces. | Carbo-hydrates. Ounces. | Calories. | Price. |
|---|---|---|---|---|---|---|
| Flour | 3 1-2 | 6.000 | 1.02 | 35.19 | 5,754 | $0.078 |
| Mutton | 1 1-2 | 2.886 | 1.622 | ..... | 1,605 | .09 |
| Rice | 1-2 | .592 | .032 | 6.352 | 815 | .03 |
| Peas | 1-2 | 1.84 | .16 | 6.32 | 790 | .035 |
| Potatoes | 2 | .64 | ..... | 6.72 | 412 | .05 |
| Suet | 1-6 | ..... | 2.38 | ..... | 600 | .01 |
| Beef | 1 | 2.656 | .518 | ..... | 1,890 | .06 |
| Whole milk | 1 | .496 | .592 | .763 | 175 | .04 |
| Skimmed milk | 1-2 | .248 | .056 | .384 | 82.5 | .005 |
| Pork | 1 | .48 | 12.48 | ..... | 3,160 | .08 |
| Eggs | 1-9 | .242 | .207 | .007 | 84 | .015 |
| Corn meal | 1 | 2.24 | 1.12 | 10.08 | 1,650 | .04 |
| Total | 12 7-9 | 18.320 | 20.187 | 65.816 | 17,017.5 | $0.533 |

## No. III.

*Breakfast.*— Boiled eggs; bread.

*Dinner.*— Picked-up codfish with milk gravy; mashed potatoes; bread; oatmeal pudding with hot sauce.

*Supper.*— Fried corn meal mush; salt pork with milk gravy.

*Analysis.*

| ARTICLE. | Pounds. | Proteids. Ounces. | Fats. Ounces. | Carbo-hydrates. Ounces. | Calories. | Price. |
|---|---|---|---|---|---|---|
| Flour | 2 | 3.84 | .48 | 22.88 | 3,320 | $0.05 |
| Eggs (6) | 1 4-9 | 3.029 | 2.587 | .088 | 1,096 | .12 |
| Codfish | 1-2 | 1.28 | .032 | ..... | 155 | .06 |
| Pork | 1-2 | .24 | 6.25 | ..... | 1,640 | .075 |
| Corn meal | 2 | 4.48 | 2.24 | 20.256 | 3,300 | .06 |
| Skimmed milk | 2 | .992 | .224 | .926 | 350 | .03 |
| Potatoes | 3 1-2 | 1.12 | ..... | 11.76 | 1,382 | .07 |
| Oatmeal | 1-2 | 1.208 | .56 | 5.456 | 922 | .02 |
| Dried apples | 1-4 | ..... | ..... | ..... | 137 | .02 |
| Sugar | 1-2 | ..... | ..... | 7.72 | 900 | .025 |
| Butter | 3-5 oz. | .005 | .519 | ..... | 135 | .01 |
| Total | 13 1-4+ | 16.194 | 12.892 | 69.086 | 13,337 | $0.54 |

## No. IV.

*Breakfast.*— Oatmeal mush with milk; bread and butter; coffee with milk and sugar.

*Dinner.*— Stuffed beef heart; fried potatoes; bread.

*Supper.*— Corn meal mush with molasses; bread with grated cheese.

*Analysis.*

| ARTICLE. | Pounds. | Proteids. Ounces. | Fats. Ounces. | Carbohydrates. Ounces. | Calories. | Price. |
|---|---|---|---|---|---|---|
| Oatmeal | 1-2 | 1.16 | .48 | 5.20 | 922 | $0.02 |
| Whole milk | 2 | 1.16 | 1.23 | 1.65 | 620 | .06 |
| Sugar | 1-4 | ..... | ..... | 3.96 | 450 | .0125 |
| Flour | 2 9-10 | 2.88 | .24 | 24.90 | 4,880 | .075 |
| Coffee | 1-8 | ..... | ..... | ..... | ..... | .034 |
| Beef heart | 2 | 5.76 | 2.56 | ..... | 848 | .10 |
| Potatoes | 2 | .64 | ..... | 6.62 | 790 | .025 |
| Corn meal | 2 | 3.14 | .90 | 19.50 | 3,300 | .06 |
| Molasses | 1-4 | ..... | ..... | 2.48 | 208 | .025 |
| Cheese | 1-3 | 1.33 | 2.08 | .10 | 681 | .05 |
| Butter | 1-3 | ..... | 4.44 | ..... | 1,205 | .0833 |
| Total | 12 3-5+ | 16.07 | 11.93 | 64.41 | 13,904 | $0.5448 |

## No. V.

*Breakfast.*— Baked potatoes; minced beef with gravy; bread; cocoa with milk and sugar.

*Dinner.*— Liver and bacon; fried potatoes; bread.

*Supper.*— Pea soup; bread; sugar syrup.

*Analysis.*

| ARTICLE. | Pounds. | Proteids. Ounces. | Fats. Ounces. | Carbohydrates. Ounces. | Calories. | Price. |
|---|---|---|---|---|---|---|
| Potatoes | 4 | 1.28 | ..... | 13.24 | 1,580 | $0.08 |
| Beef | 1-2 | 1.68 | .44 | ..... | 1,215 | .04 |
| Flour | 3 | 5.76 | .72 | 34.32 | 4,980 | .075 |
| Cocoa shells | ..... | ..... | ..... | ..... | ..... | .02 |
| Sugar | 1-2 | ..... | ..... | 7.92 | 900 | .0255 |
| Milk | 1 | .58 | .61 | .825 | 310 | .03 |
| Liver | 2 | 6.40 | 1.60 | .80 | 1,338 | .16 |
| Bacon | 1-2 | .80 | 5.60 | ..... | 1,480 | .06 |
| Peas | 1 | 3.68 | .32 | 8.32 | 1,580 | .05 |
| Beef suet | 1-8 | ..... | 1.96 | ..... | 900 | .01 |
| Total | 12 5-8 | 20.18 | 11.25 | 65.425 | 14,283 | $0.5505 |

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## No. VI.

*Breakfast.*— Bread; fried bacon; oatmeal with sugar syrup.

*Dinner.*— Fried catfish with mint sauce; boiled potatoes; bread.

*Supper.*— Noodle soup; toasted bread with cheese.

*Analysis.*

| ARTICLE. | Pounds. | Proteids. Ounces. | Fats. Ounces. | Carbohydrates. Ounces. | Calories. | Price. |
|---|---|---|---|---|---|---|
| Catfish | 3 1-2 | 7.00 | .20 | ..... | 867 | $0.175 |
| Flour | 3 | 5.76 | .72 | 34.32 | 4,980 | .075 |
| Potatoes | 2 | .64 | 3.48 | 6.62 | 790 | .025 |
| Cheese | 3-4 | 3.00 | 6.40 | .24 | 1,533 | .1125 |
| Bacon | 1-2 | .24 | 1.12 | ..... | 1,480 | .06 |
| Oatmeal | 1 | 1.92 | .96 | 10.40 | 1,845 | .04 |
| Sugar | 1 | 2.12 | ..... | 15.84 | 1,800 | .05 |
| Noodle soup | ..... | ..... | ..... | ..... | .. ... | .01 |
| Total | 11 3-4 | 20.68 | 12.88 | 67.42 | 13,295 | $0.5475 |

## No. VII.

*Breakfast.*— Cracked wheat; whole milk; pea pudding.

*Dinner.*— Corned beef; cabbage; boiled potatoes; bread.

*Supper.*— Corn meal mush; bread; sugar syrup.

*Analysis.*

| ARTICLE. | Pounds. | Proteids. Ounces. | Fats. Ounces. | Carbohydrates. Ounces. | Calories. | Price. |
|---|---|---|---|---|---|---|
| Cracked wheat | 1-4 | .56 | .28 | 2.52 | 412 | $0.0125 |
| Whole milk | 2 | 1.16 | 1.24 | 1.66 | 620 | .06 |
| Peas | 1-2 | 1.84 | .16 | 6.32 | 790 | .02 |
| Corned beef | 2 | 3.84 | 9.34 | ..... | 2,924 | .20 |
| Cabbage | 3 | .912 | .096 | 2.946 | 510 | .10 |
| Potatoes | 2 | .64 | ..... | 6.72 | 412 | .025 |
| Flour | 2 | 3.84 | .48 | 22.88 | 3,320 | .05 |
| Sugar | 1-2 | ..... | ..... | 7.92 | 900 | .025 |
| Corn meal | 2 | 3.14 | 1.20 | 22.40 | 3,300 | .06 |
| Total | 14 1-4 | 15.932 | 12.796 | 73.366 | 13,188 | $0.5525 |

## No. VIII.

*Breakfast.*—Buckwheat cakes; fried salt pork with brown gravy.

*Dinner.*—Irish stew; bread; farina mush with sugar.

*Supper.*—Broiled herring; dry toast with butter.

*Analysis.*

| ARTICLE. | Pounds. | Proteids. Ounces. | Fats. Ounces. | Carbohydrates. Ounces. | Calories. | Price. |
|---|---|---|---|---|---|---|
| Herring | 1 | 3.36 | 1.36 | ..... | 745 | $0.10 |
| Flour | 2 | 3.84 | .48 | 22.88 | 3,320 | .05 |
| Butter | 1-4 | ..... | 3.33 | ..... | 904 | .06 |
| Mutton | 2 | 5.44 | 1.92 | ..... | 2,450 | .12 |
| Potatoes | 1 1-2 | .48 | ..... | 4.97 | 592 | .03 |
| Pork | 1-2 | .24 | 6.25 | ..... | 1,580 | .05 |
| Buckwheat | 2 | 3.04 | .64 | 23.30 | 3,240 | .10 |
| Sugar | 1-4 | ..... | ..... | 3.96 | 450 | .0125 |
| Farina | 1-2 | .83 | ..... | 6.07 | 802 | .025 |
| Onions | 1-8 | ..... | ..... | ..... | ..... | .01 |
| Total | 10 1-8 | 17.23 | 13.98 | 61.18 | 14,083 | $0.5575 |

## No. IX.

*Breakfast.*—Fried bacon; fried potatoes; bread; coffee with milk and sugar.

*Dinner.*—Beef soup with macaroni; boiled beef with mustard sauce; bread.

*Supper.*—Baked beans; milk toast.

*Analysis.*

| ARTICLE. | Pounds. | Proteids. Ounces. | Fats. Ounces. | Carbohydrates. Ounces. | Calories. | Price. |
|---|---|---|---|---|---|---|
| Macaroni | 1-4 | .36 | .02 | 3.06 | 412 | $0.03 |
| Beef | 2 | 6.72 | 1.76 | ..... | 4,860 | .16 |
| Beans | 1 1-2 | 5.52 | .48 | 34.32 | 4,980 | .079 |
| Flour | 3 | 5.76 | .72 | 12.84 | 2,377 | .075 |
| Skimmed milk | 1 | .496 | .112 | .76 | 175 | .015 |
| Butter | 1-16 | .01 | .86 | ..... | 225 | .015 |
| Bacon | 1-2 | .24 | 6.40 | ..... | 1,480 | .06 |
| Potatoes | 2 | .64 | ..... | 6.72 | 790 | .025 |
| Sugar | 1-4 | ..... | ..... | 3.96 | 450 | .012 |
| Whole milk | 1-2 | .29 | .31 | .46 | 155 | .015 |
| Coffee | 1-8 | .... | ..... | ..... | ..... | .034 |
| Total | 11 3-16 | 20.036 | 10.662 | 62.12 | 15,904 | $0.520 |

## No. X.

*Breakfast.*— Dry toast and butter; baked potatoes.

*Dinner.*— Pea soup; bread; beef roll; mashed potatoes.

*Supper.*— Boiled rice fried; sugar syrup.

*Analysis.*

| ARTICLE. | Pounds. | Proteids. Ounces. | Fats. Ounces. | Carbohydrates. Ounces. | Calories. | Price. |
|---|---|---|---|---|---|---|
| Rice | 1 | 1.28 | .16 | 12 24 | 1,630 | $0.08 |
| Sugar | 3-4 | ..... | ..... | 11.55 | 1,350 | .0375 |
| Beef | 1 1-2 | 5.04 | 1.32 | ..... | 3,645 | .12 |
| Sausage | 1-4 | .58 | 1.50 | ..... | 487 | .03 |
| Pork | 1-4 | .06 | 1.60 | ..... | 98 | .0125 |
| Peas | 1 | 3.68 | .32 | 8.32 | 1,580 | .05 |
| Potatoes | 4 | 1.28 | .... | 13.24 | 1,480 | .05 |
| Flour | 2 | 3.84 | .48 | 22.88 | 3,320 | .05 |
| Butter | 1-4 | .04 | 3.46 | ..... | 904 | .06 |
| Suet | 1-8 | ..... | 1.78 | ..... | 450 | .01 |
| Total | 11 1-8 | 15.80 | 10.62 | 68.23 | 14,944 | $0.50 |

## No. XI.

*Breakfast.*— Fried corn meal mush; fried potatoes; sugar syrup.

*Dinner.*— Potato soup; baked liver; boiled rice with cheese.

*Supper.*— Scalloped beef with hominy; biscuits; stewed prunes.

*Analysis.*

| ARTICLE. | Pounds. | Proteids. Ounces. | Fats. Ounces. | Carbohydrates. Ounces. | Calories. | Price. |
|---|---|---|---|---|---|---|
| Corn meal | 1 | 1.57 | .60 | 9.75 | 1,650 | $0.03 |
| Beef suet | 1-2 | ..... | 7.84 | ..... | 1,800 | .04 |
| Sugar | 3-4 | ..... | ..... | 10.58 | 1,350 | .0375 |
| Potatoes | 4 1-2 | 1.60 | ..... | 10.75 | 1,777 | .055 |
| Liver | 1 1-2 | 4.80 | .96 | ..... | 669 | .10 |
| Rice | 3-4 | .96 | .12 | 9.18 | 1,221 | .06 |
| Cheese | 1-4 | 1.00 | 1.16 | ..... | 511 | .04 |
| Beef | 1 1-2 | 4.08 | 1.44 | ..... | 3,645 | .09 |
| Hominy | 1-2 | .79 | .30 | 5.60 | 816 | .02 |
| Dried prunes | 1-2 | ..... | ..... | 5.72 | 665 | .04 |
| Flour | 1 | 1.92 | .24 | 11.44 | 1,660 | .025 |
| Total | 12 3-4 | 16.72 | 12.66 | 63.02 | 15,764 | $0.5375 |

## No. XII.

*Breakfast.*— Codfish balls; corn meal mush; sugar syrup.

*Dinner.*— Bean soup with beef; bread; frozen pudding.

*Supper.*— Potato salad; bread.

*Analysis.*

| ARTICLE. | Pounds. | Proteids. Ounces. | Fats. Ounces. | Carbo-hydrates. Ounces. | Calories. | Price. |
|---|---|---|---|---|---|---|
| Codfish | 1-2 | 1.28 | .03 | ..... | 155 | $0.06 |
| Potatoes | 5 | 1.60 | ..... | 16.57 | 1,975 | .0625 |
| Corn meal | 1 | 1.57 | .45 | 9.75 | 1,650 | .03 |
| Sugar | 3-4 | ..... | ..... | 11.88 | 1,350 | .0375 |
| Beans | 1 | 3.68 | .32 | 8.56 | 1,585 | .053 |
| Salt pork | 5-8 | .30 | 8.00 | ..... | 1,975 | .075 |
| Eggs | 1-2 | .25 | .21 | ..... | 84 | .015 |
| Flour | 2 | 3.82 | .48 | 22.88 | 3,320 | .05 |
| Whole milk | 2 | 1.16 | 1.24 | 1.66 | 620 | .06 |
| Ice and salt | ..... | ..... | ..... | ..... | ..... | .07 |
| Onion and vinegar | ..... | ..... | ..... | ..... | ..... | .01 |
| Beef | 1-2 | 3.28 | .42 | ..... | 1,215 | .04 |
| Total | 13 7-8 | 16.94 | 11.15 | 71.30 | 13,929 | $0.563 |

## No. XIII.

*Breakfast.*— Flour pancakes; minced beef, with gravy.

*Dinner.*— Sausage with corn meal cakes; fried potatoes; bread.

*Supper.*— Bread and butter; bananas cut up with sugar; cocoa.

*Analysis.*

| ARTICLE. | Pounds. | Proteids. Ounces. | Fats. Ounces. | Carbo-hydrates. Ounces. | Calories. | Price. |
|---|---|---|---|---|---|---|
| Butter | 1-4 | ..... | 3.33 | ..... | 903 | $0.06 |
| Flour | 3 | 5.76 | .72 | 34.32 | 4,980 | .075 |
| Sugar | 1-4 | ..... | ..... | 3.96 | 450 | .0125 |
| Whole milk | 1 | .58 | .61 | .82 | 310 | .03 |
| Bananas | 1 | .22 | .22 | 4.76 | 643 | .06 |
| Skimmed milk | 2 | 1.06 | .24 | 1.65 | 350 | .03 |
| Suet | 1-8 | ..... | 1.96 | ..... | 450 | .01 |
| Beef | 1 1-2 | 5.04 | 1.32 | ..... | 3,645 | .09 |
| Sausage | 1 | 2.32 | 6.00 | ..... | 1,851 | .12 |
| Corn meal | 1 | 1.57 | .45 | 9.75 | 1,650 | .03 |
| Potatoes | 2 | .64 | ..... | 6.62 | 790 | .025 |
| Cocoa shells | ..... | ..... | ..... | ..... | ..... | .02 |
| Total | 13 1-8 | 17.19 | 14.85 | 61.88 | 16,022 | $0.5625 |

MANUFACTURES AND LIBERAL ARTS BUILDING

## No. XIV.

*Breakfast.*— Oatmeal mush; whole milk; fried potatoes.

*Dinner.*— Baked salt pork and beans; boiled rice with sugar; bread.

*Supper.*—Toast and butter; salad of lettuce and cold beans.

*Analysis.*

| ARTICLE. | Pounds. | Proteids. Ounces. | Fats. Ounces. | Carbo-hydrates. Ounces. | Calories. | Price. |
|---|---|---|---|---|---|---|
| Flour | 1 1-2 | 2.88 | .36 | 17.16 | 2,490 | $0.0375 |
| Butter | 1-5 | ..... | 2.66 | ..... | 722 | .048 |
| Lettuce | 1-2 | .10 | ..... | .20 | 35 | .05 |
| Beans | 2 | 7.36 | .64 | 17.10 | 3,170 | .10 |
| Oatmeal | 1 1-2 | 3.48 | 1.44 | 15.60 | 2,767 | .06 |
| Whole milk | 3 | 1.74 | 1.85 | 2.48 | 930 | .09 |
| Potatoes | 2 | .64 | ..... | 6.62 | 790 | .025 |
| Rice | 3-4 | .96 | .12 | 9.18 | 1,221 | .06 |
| Sugar | 1-4 | ..... | ..... | 3.85 | 450 | .0125 |
| Salt pork | 1-2 | .24 | 6.40 | ..... | 1,580 | .06 |
| Total | 12 1-5 | 17.40 | 13.47 | 72.19 | 14,155 | $0.543 |

During the month of July the experiment was made of putting these bills of fare to a practical test in the Workingman's Model Home. For this purpose a family was secured to live in the house and represent our theoretical family. A Columbian guard, lodging in the nearest barracks, was very glad to come to the house for his meals. A widow who had been secured as an assistant in the care of the house brought her three children and lived there night and day through the month. The object of the experiment was explained to the man and woman, and as they were intelligent people they readily assented to the proposed conditions. They promised to eat only what was furnished them in the home.

They also agreed that if they found the food insufficient to satisfy appetite or to maintain strength they would frankly say so. The children were constantly under the eye of their mother and of the experimenter and could be trusted to say so if they were hungry. On the day on which the experiment began Dr. J. S. Mitchell, one of Chicago's eminent physicians, came to the house and gave the family a thorough physical examination, with the following results:

"Record taken by J. S. Mitchell, M. D., 2954 Prairie avenue, Chicago, July 2, 1893.

"Man, American — age, 28 years; height, 6 ft. 1 in. in stockings; girth, 34 in.; weight, 180 lbs; pulse, 80 (warm day, been walking fast); well nourished, florid; comes of family of good eaters; occupation, Columbian guard.

"Woman, Irish — age, 34 years; weight, 100 lbs.; girth, 25½ in.; florid, but looks a little haggard and overworked; occupation, housework, cleaning, washing, etc.

"Boy, Irish parentage, American born — age, 8 years; weight, 54 lbs.; girth, 25 in.; florid, robust.

"Girl, Irish parentage, American born — age, 6 years; weight 40½ lbs.; girth, 21⅝ in.; florid, robust.

"Boy, Irish parentage, American born — age, 5 years; weight, 41½ lbs.; girth, 24¾ in.; florid, robust.

"All would well represent a typical healthy family.

"(Signed) J. S. MITCHELL, M. D."

The food was purchased each day at the ordinary retail prices at the small groceries and markets in the vicinity of Jackson Park. Prices averaged about the same for staple articles as in Brooklyn during the spring. Meats were possibly a little cheaper for the same quality; that is, a better cut of beef could be had for eight cents in Chicago than in Brooklyn. Fresh fruit with the exception of bananas was dearer. Chicago prices are shown in the following list:

MARKET PRICES, CHICAGO, JULY, 1893.

FOOD PURCHASED AT RETAIL.

| Article. | How purchased. | Price per pound. |
|---|---|---|
| Beef (shoulder) | By the pound, 6 cents to 8 cents....usual | $0.08 |
| Corned beef | By the pound | .10 |
| Dried beef | By the pound | .18 |
| Beef heart | Each, 10 cents to 12 cents....about | .056 |
| Liver (cow's) | By the pound | .05 |
| Veal | By the pound | .18 |
| Mutton | By the pound, 5 cents to 14 cents....usual | .06 |
| Bacon | By the pound | .16 |
| Salt pork | By the pound | .10 |
| Ham | By the pound | .20 |
| Codfish (salt) | By the pound | .12 |
| Herring (dried) | By the pound | .08 |
| Butter | By the pound | .24 |
| Whole milk | By the quart, 6 cents | .028 |
| Skimmed milk | By the quart, 4 cents | .018 |
| Eggs | By the dozen, 15 cents | .116 |
| Cheese | By the pound | .12 |
| Flour | By the sack, 50 lbs. for $1.17 | .0234 |
| Oatmeal | By the pound | .035 |
| Rice | By the pound | .075 |
| Hominy | By the pound | .03 |
| Corn meal | By the pound | .025 |
| Cracked wheat | By the pound | .05 |
| Corn starch | By the pound | .08 |
| Potatoes (new) | By the half bushel, 30 lbs. for 50 cents | .016 |
| Cabbage | By the head, 8 to 10 cents....about | .04 |
| Lettuce | By the head, 5 cents....about | .036 |
| Dried peas | By the pound | .035 |
| Dried beans | By the pound | .055 |
| Onions | By the bunch, 5 cents....about | .072 |
| Beets | By the bunch, 5 cents....about | .051 |
| String beans | By the quart, 5 cents....about | .051 |
| Bananas | By the dozen, 10 cents | .046 |
| Dried apples | By the pound | .12 |
| Apples | By the quart | .04 |
| Dried prunes | By the pound | .12 |
| Peaches | By the quart, 10 cents | .16 |
| Raisins | By the pound | .12 |
| Sugar | By the pound, 10 lbs. for 55 cents | .055 |

| | | |
|---|---|---|
| Syrup | By the quart, 16 1-2 cents | $0.059 |
| Macaroni | By the pound | .09 |
| Coffee | By the pound, 3 1-4 lbs. for $1 | .307 |
| Tea | By the pound | .50 |

As might have been expected it was found necessary to modify the prepared bills of fare from day to day. Sometimes it was impossible to get or to prepare certain articles set down. It was found on trial that certain members of the family could not eat certain things; *e. g.*, the woman disliked cheese and the man would not eat salt pork. The children cared for nothing at breakfast but oatmeal and milk, and with bread and butter added the man and woman were satisfied. All had been accustomed to butter, and it was found necessary to use more than was reckoned on.

No attempt was made to limit the food in quantity. An excess over that estimated was always prepared and the family allowed to satisfy their appetites with the object of seeing how nearly the two amounts agreed. Very often, as would happen in any family, food was left over from one meal which could be utilized at another, and as no waste was allowable this sometimes upset the planned bill of fare.

As the experimenter wished to know the exact quantities consumed daily, a method of weighing different from that usually adopted in food experiments was used. It involved much more work and was probably less accurate in its final results.

Instead of weighing all food in the house at the beginning of the experiment, all that purchased during the experiment and deducting that which was left at the end, including the waste, the raw material used in preparing each meal was weighed at the time of using, as was also the cooked food to get the gain or loss in weight through cooking. All food left on the table, as well as the refuse on the plates and in preparation, was then weighed, and from these figures the amounts actually consumed were estimated. Had the sum total of food actually consumed during the month of experiment been verified by the employment of the former method the work would have been of more value. But it was difficult to do it for the reason that it was necessary for the experimenter and her assistant to live in the house, and lack of time to prepare entirely different food necessitated the weighing system employed in order to get at just what the family consumed and the exact cost of their portion.

The work would also have been of greater value had it been possible to have had chemical analyses made from day to day of the food actually used, instead of estimating these values from the tables. Flour, cereals, milk, butter and vegetables are fairly constant in their analyses; the greatest variations would be in the meats, the same cuts from different animals often varying quite largely.

The waste of food during the month was very small. Great care was taken in the selection of meats to buy those pieces which had as small a proportion of bone as possible and no superfluous fat. Every scrap of meat left over was utilized. Bones, any uneaten fat, etc., were put into a stock pot and allowed to simmer for hours in the Aladdin oven, to form a basis for the bean or pea or cabbage soup. There was

absolutely no waste at all of such things as milk, bread, butter, sugar, etc. If the children took a piece of bread and butter more than they could eat, it was set aside for the bite they sometimes insisted upon between meals. The waste consisted almost entirely of the bones of meat and of potato parings. During the month, out of the 412.35 pounds of food purchased, only eleven pounds were wasted.

As before stated, the cooking was done almost entirely with Mr. Atkinson's Aladdin oven. Potatoes were boiled on the small gas stove used for heating water. Griddle cakes, fried bacon and corn meal mush were also cooked on the gas stove. Everything else, baking and cooking of meats and vegetables, was done in the oven. By the use of the Aladdin oven there was, of course, an advantage gained over the methods which would be used by the poor laborer's wife. The cheap cuts of meat purchased were made extremely palatable by the long, slow cooking. Much time was saved, as no close watching was necessary and all heating of the kitchen was avoided.

The bills of fare which follow are those used through the twenty-eight days of experiment from July second to July thirty-first. They give the amount and analysis of the food actually consumed.

The family, according to Carrol Wright's method, represented the consuming power of three and forty-five-one-hundredths men. Man equals 100 units; woman equals 90 units; boy of 8 equals 75 units; girl of 6 equals 40 units; boy of 5 equals 40 units; total, 345 units.

In bills of fare Nos. VI, XIV, XV and XVI, the apples used for sauce were sent to the house by gentlemen connected with the New York State horticultural exhibit, and were those somewhat specked and so replaced by others. In bill of fare No. IX the peaches were bought on a Saturday afternoon when they were selling cheap. The quantity, one quart, gave each member of the family one sauce dish full and served as a relish to the bread and butter. In bills of fare Nos. XII, XIII, XIV and XV, the lunch was carried by man to be eaten in place of breakfast, as he was obliged to be on duty at that time. In Nos. XVI, XX, XXIII and XXVII, the weight of the bananas used is given *without* skins.

On one occasion the man confessed to eating several cookies and drinking a glass of milk offered him while making a social call when off duty. On another day a comrade treated him to a plate of ice cream. This, he insisted, was the extent to which he broke his contract to eat nothing but what was furnished him at the house. The children were given candy several times by benevolent visitors, who thought them abused because they were deprived of sweet things for a whole month. Usually, however, they were discovered in time and coaxed to give it up. The man and children drank neither tea nor coffee during the month. The woman had always been accustomed to coffee and was unwilling to give it up. She drank it for breakfast. The milk and sugar used in it enter into the analyses. It is believed that the summary showing the food consumed during the month represents with fair accuracy that which was actually eaten.

The comparison made at the end of the summary, where the average per month per day is given, shows that the amount of proteids con-

AGRICULTURAL BUILDING, Electric Fountains

sumed is very slightly in excess of both the American and German standards. The carbohydrates are considerably in excess of the American standard, while the fats fall below. This may be because the experiment was conducted through the hot weather of July. Though the fats fall somewhat below the American standard they are largely in excess of the German. The calories, or heat and mechanical energy values of the food consumed, are up to the standard.

The health of the family throughout the month was good. The physician looked in upon them occasionally, from interest in the experiment, but there was no need of his professional services. The man and woman both declared themselves perfectly content with the quantity and quality of the food they had been given, the man adding that he would be willing to live on such a diet indefinitely, provided he might have a little more fresh fruit in the hot weather.

The physician's examination at the end of the experiment showed that the family were in as good health at the end as at the beginning of the month. Unfortunately, the examination, including the re-weighing, could not take place at the same hour of the day as the original weighing. The latter took place on July second at one P. M. immediately after a hearty dinner. The former was unavoidably delayed until six P. M. of July thirty-first, nearly six hours having elapsed since a meal. The same clothing was worn on both occasions. The second weighing gave the result: Man, 185½ pounds; woman, 99¼ pounds; boy of eight, 53¾ pounds; girl of six, 40¾ pounds; boy of five, 40¾ pounds.

The man showed a considerable gain. If the woman had lost more than the record shows it would not have been remarkable considering the circumstances under which she worked during the month. All the housework for a family of five persons, cooking, washing and ironing, etc., was necessarily carried on in the presence of from 500 to 2,000 persons daily. This was a strain to which she was unaccustomed, and it speaks well for the diet that she did not loose more. The children held their own, though the experimenter was disappointed that there was no perceptible gain, since they were broken during the month of their bad habits of eating. Though previously well fed, they had been accustomed to eating between meals when they felt hungry, and had been given injudicious quantities of cake and candy. It is likely that another month of simple diet and regular hours would have resulted in a visible gain.

The average cost per day of the food was fifty-four cents, one cent less than was estimated. In the bills of fare fractions of a cent are given. This is perfectly fair as will be seen if one takes for example the case of sugar. None was wasted, and if only two or three ounces were used each day it is obviously proper to use the fraction of the cost per pound.

Under other conditions it would have been possible to do more scientific work in such an experiment. At the same time it must be remembered that the very conditions that hampered in one way were those necessary for the success of the experiment in another, as the chief

object of the exhibit was not primarily scientific nor to show the one right way of doing any one thing, but to call the attention of the people to the importance of the questions involved. The very failures of the exhibit will perhaps be more stimulating than its successes, since they will open the door to criticism and discussion.

The food experiment certainly accomplished one result. Hundreds of people from all over the United States found out that it is not *necessary* to spend over fifty-four cents per day to feed a family of five and to keep them in good health. The less we spend for food the more we can spend for those things which can minister to the higher needs of ourselves and others. There is no question but what more and better can be done on fifty-four cents per day than was done in this experiment. It remains for those interested to show just *how* and *what*.

## BILLS OF FARE USED DURING JULY, 1893.

### No. I.

*Breakfast.*— Milk toast; baked beans; coffee with milk and sugar.

*Dinner.*— Brown fricassee of beef; potatoes stewed with milk; bread; hominy with sugar syrup.

*Supper.*— Corn meal griddle cakes; minced beef with gravy.

*Analysis of food actually consumed.*

| ARTICLE. | QUANTITY. | | Proteids. Ounces. | Fats. Ounces. | Carbohydrates. Ounces. | Calories. | Price. |
|---|---|---|---|---|---|---|---|
| | Lbs. | Ounces. | | | | | |
| Beans..... | .. | 8.66 | 2.00 | .017 | 5.126 | 872 | $0.027 |
| Potatoes..... | 2 | ..... | .672 | .032 | 5.728 | 750 | .038 |
| Flour..... | 1 | 14 | 3.30 | .330 | 22.47 | 3,082.5 | .048 |
| Whole milk..... | 2 | 4.75 | 1.249 | 1.359 | 1.764 | 709.9 | .07 |
| Butter..... | .. | 1.25 | .012 | 1.062 | .006 | 281.9 | .015 |
| Sugar..... | .. | 8.50 | .025 | ..... | 8.219 | 954 | .026 |
| Beef..... | 2 | 4 | 7.02 | 5.616 | ..... | 2,295 | .16 |
| Hominy..... | .. | 8 | 1.12 | .56 | 5.04 | 825 | .015 |
| Salt pork..... | .. | 3.75 | .033 | 3.105 | ..... | 807.3 | .03 |
| Skimmed milk.. | 2 | 14 | 1.426 | .322 | 2.208 | 503.1 | .05 |
| Corn meal..... | 1 | ..... | 1.472 | .608 | 11.296 | 1,645 | .025 |
| Total..... | 14 | 2.91 | 18.329 | 13.011 | 61.857 | 12,725.7 | $0.504 |

## No. II.

*Breakfast.*— Cracked wheat; milk; bread and butter; French fried potatoes.

*Dinner.*— Fried liver and bacon; boiled potatoes; bread and butter; baked beans (cold from previous day).

*Supper.*— Pea soup; bread and butter; syrup (for children on bread); tea.

*Analysis.*

| ARTICLE. | QUANTITY. | | Proteids. Ounces. | Fats. Ounces. | Carbohydrates. Ounces. | Calories. | Price. |
|---|---|---|---|---|---|---|---|
| | Lbs. | Ounces. | | | | | |
| Cracked wheat | .. | 10 | 1.164 | .126 | 7.100 | 993.786 | $0.0375 |
| Potatoes | 3 | 6 | 1.134 | .054 | 9.666 | 1,269.575 | .063 |
| Flour | 2 | 1 | 3.63 | .363 | 24.717 | 3,390.620 | .045 |
| Butter | .. | 2.25 | .0225 | 1.9125 | .0112 | 508.157 | .033 |
| Sugar | .. | 5.50 | ..... | ..... | 5.379 | 625.228 | .025 |
| W. milk | 2 | 7 | 1.404 | 1.56 | 2.886 | 909.949 | .085 |
| Liver | .. | 13 | 2.613 | .702 | .455 | 541.694 | .06 |
| Bacon | .. | 8 | .800 | 5.600 | ..... | 1,569.456 | .06 |
| Beans | .. | 5 | 1.155 | .10 | 2.960 | 3,114.857 | .017 |
| Peas | .. | 8 | 2.136 | .136 | 4.512 | 808.587 | .017 |
| Syrup | .. | 3.25 | ..... | ..... | 2.340 | 271.989 | .012 |
| Total | 11 | 5 | 14.0585 | 10.5535 | 60.0262 | 14,003.898 | $0.4545 |

## No. III.

*Breakfast.*— Hominy with milk; bread and butter; fried bacon.

*Dinner.*— Stewed mutton with gravy; mashed potatoes; bread; boiled rice with milk and sugar.

*Supper.*— Dry toast and butter; cold pressed meat (made from meat left from dinner); rice with milk and sugar (left from dinner).

*Analysis.*

| ARTICLE. | QUANTITY. | | Proteids. Ounces. | Fats. Ounces. | Carbohydrates. Ounces. | Calories. | Price. |
|---|---|---|---|---|---|---|---|
| | Lbs. | Ounces. | | | | | |
| Hominy | .. | 8 | .760 | .320 | 5.520 | 814.325 | $.015 |
| Flour | 1 | 13.4 | 3.234 | .3234 | 22.0206 | 3,020.664 | .052 |
| Butter | .. | 1.5 | .015 | 1.275 | .0075 | 338.774 | .022 |
| W. milk | 3 | 6.5 | 1.962 | 2.180 | 4.0330 | 1,271.596 | .107 |
| Sugar | .. | 11.25 | ..... | ..... | 11.0025 | 1,278.817 | .035 |
| Bacon | .. | 6.5 | .650 | 4.550 | ..... | 1,275.183 | .05 |
| Mutton | 3 | 2 | 8.450 | 14.350 | ..... | 4,765.635 | .16 |
| Potatoes | 1 | 15 | .651 | .031 | 5.549 | 728.830 | .038 |
| Rice | .. | 8 | .592 | .032 | 6.352 | 815.572 | .037 |
| Total | 12 | 8.15 | 16.314 | 23.0614 | 54.4846 | 14,309.396 | $0.516 |

## No. IV.

*Breakfast.*— Oatmeal mush with milk and sugar; bread and butter.

*Dinner.*— Corned beef; cabbage; boiled potatoes; bread and butter.

*Supper.*— Corn meal mush and milk; corned beef hash; bread and butter.

*Analysis.*

| ARTICLE. | QUANTITY. | | Proteids. Ounces. | Fats. Ounces. | Carbo-hydrates. Ounces. | Calories. | Price. |
|---|---|---|---|---|---|---|---|
| | Lbs. | Ounces. | | | | | |
| W. milk | 3 | 4.5 | 1.89 | 2.10 | 3.865 | 1,222.607 | $0.0945 |
| Flour | 1 | 7.2 | 2.552 | .2552 | 17.3768 | 2,383.563 | .0338 |
| Butter | .. | 2.5 | .025 | 2.125 | .0125 | 564.625 | .0375 |
| Sugar | .. | 6 | ..... | ..... | 5.868 | 682.066 | .0205 |
| Oatmeal | .. | 11 | 1.661 | .781 | 7.502 | 1,270.975 | .0239 |
| Corned beef | 2 | ..... | 4.256 | 8.512 | ..... | 2,738.927 | .20 |
| Cabbage | 1 | 9.5 | .8715 | .1245 | 2.2825 | 399.430 | .10 |
| Potatoes | 3 | 5 | 1.113 | .053 | 9.487 | 1,246.064 | .056 |
| Corn meal | .. | 10 | .920 | .380 | 7.060 | 1,027.744 | .0156 |
| Total | 13 | 7.7 | 13.2885 | 14.3307 | 53.4538 | 11,536.001 | $0.5818 |

## No V.

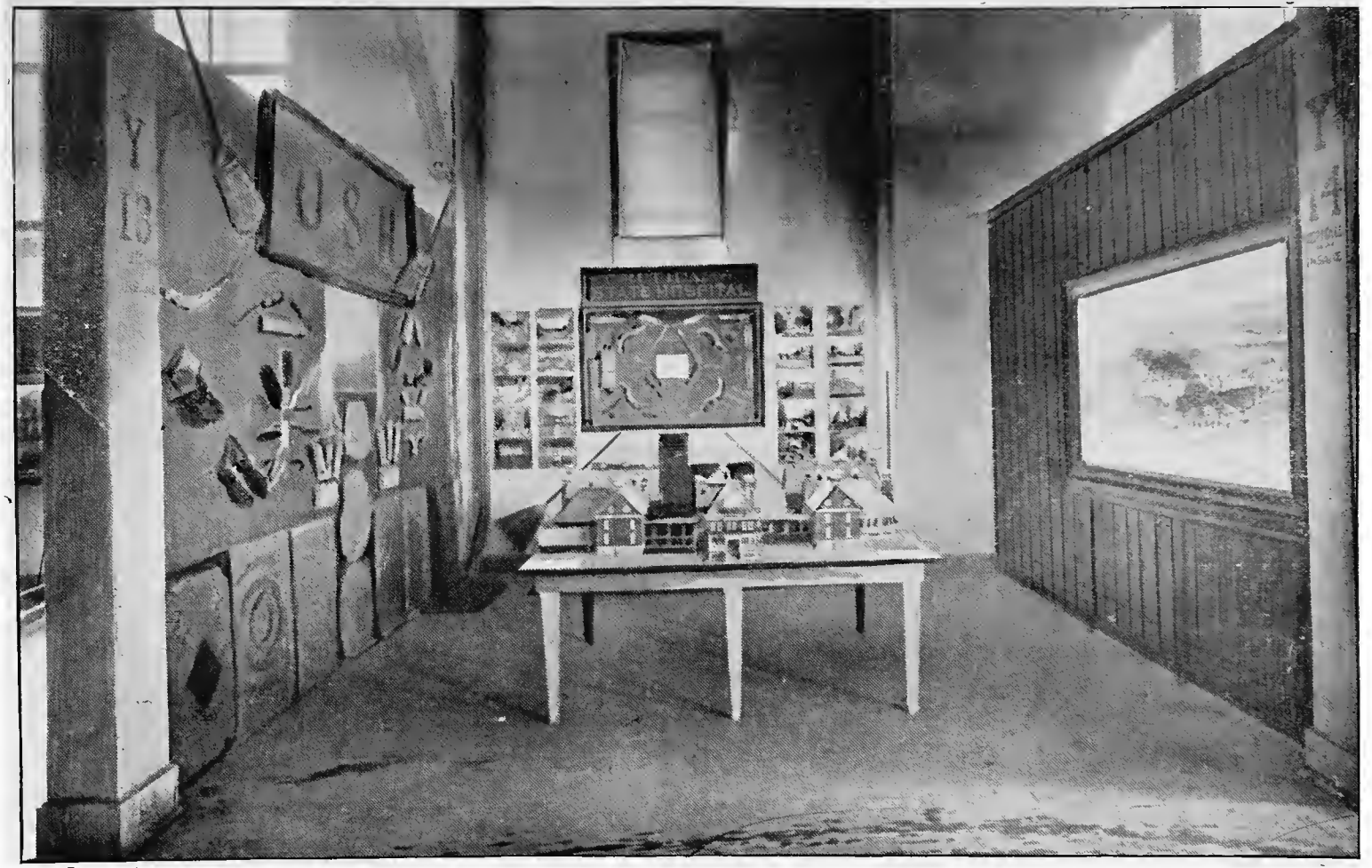
*Breakfast.*— Scrambled eggs; bread and butter; apple sauce.

*Dinner.*— Codfish with milk gravy; mashed potatoes; bread; oatmeal with milk and sugar.

*Supper.*— Fried corn meal mush; bread and butter; syrup.

*Analysis.*

| ARTICLE. | QUANTITY. | | Proteids. Ounces. | Fats. Ounces. | Carbo-hydrates. Ounces. | Calories. | Price. |
|---|---|---|---|---|---|---|---|
| | Lbs. | Ounces. | | | | | |
| Apples | 1 | 4.7 | .0414 | .0828 | 3.2913 | 452.481 | Given. |
| Sugar | .. | 5.5 | ..... | ..... | 5.3790 | 625.228 | $0.018 |
| Eggs (10) | 1 | 1.5 | 1.6075 | 1.8373 | ..... | 671.123 | .125 |
| S. milk | 3 | 7.25 | 1.7127 | .3867 | 2.6520 | 609.020 | .060 |
| Flour | 1 | 12.4 | 3.124 | .3124 | 21.2716 | 2,917.796 | .041 |
| Butter | .. | 3 | .030 | 2.55 | .015 | 677.550 | .045 |
| Potatoes | 3 | 8 | 1.176 | .056 | 10.024 | 3,936.563 | .089 |
| Codfish | .. | 8 | 1.712 | .024 | ..... | 262.271 | .06 |
| Oatmeal | .. | 6 | .906 | .426 | 3.792 | 595.588 | .013 |
| Corn meal | 1 | 8 | 1.608 | .912 | 16.944 | 2,396.845 | .037 |
| Syrup | .. | 6.5 | ..... | ..... | 4.682 | 544.212 | .024 |
| Total | 14 | 6.85 | 11.9176 | 6.5872 | 68.0509 | 13,688.677 | $0.512 |



UTICA STATE HOSPITAL EXHIBIT

## No VI.

*Breakfast.*— Oatmeal with milk and sugar; bread and butter; apple sauce.

*Dinner.*— Irish stew; corn starch pudding with hot sauce.

*Supper.*— Toast; minced beef with gravy.

*Analysis.*

| ARTICLE. | QUANTITY. | | Proteids. Ounces. | Fats. Ounces. | Carbohydrates. Ounces. | Calories. | Price. |
|---|---|---|---|---|---|---|---|
| | Lbs. | Ounces. | | | | | |
| Apples | 1 | 15 | .062 | .124 | 4.929 | 612.822 | Given. |
| Oatmeal | 1 | ..... | 2.416 | 1.136 | 10.912 | 1,848.692 | $0.035 |
| Flour | 2 | 7.6 | 4.356 | .4356 | 29.9376 | 4,088.173 | .057 |
| Butter | .. | 3.5 | .035 | 2.975 | .0175 | 790.469 | .052 |
| Sugar | .. | 10 | ..... | ..... | 9.780 | 1,136.778 | .034 |
| S. milk | 5 | .25 | 2.487 | .561 | 3.852 | 883.678 | .088 |
| Beef | 3 | ..... | 9.36 | 7.488 | ..... | 3,060.099 | .22 |
| Onions | 1 | 1.5 | .2450 | .0525 | 1.7675 | 247.706 | .05 |
| Potatoes | 1 | 8 | .504 | .024 | 4.296 | 564.318 | .038 |
| Corn starch | .. | 2.5 | ..... | ..... | 2.445 | 284.194 | .012 |
| Total | 17 | 0.35 | 19.4650 | 12.7961 | 67.9366 | 13,516.929 | $0.586 |

## No. VII.

*Breakfast.*— Oatmeal mush with milk and sugar; bread and butter; fried potatoes.

*Dinner.*— Bean soup; fried ham; boiled potatoes; bread and butter.

*Supper.*— Bean soup with bread; corn meal mush with syrup.

*Analysis.*

| ARTICLE. | QUANTITY. | | Proteids. Ounces. | Fats. Ounces. | Carbohydrates. Ounces. | Calories. | Price. |
|---|---|---|---|---|---|---|---|
| | Lbs. | Ounces. | | | | | |
| S. milk | 3 | 4.5 | 1.627 | .367 | 2.520 | 578.787 | $0.057 |
| Oatmeal | 1 | ..... | 2.416 | 1.136 | 10.912 | 1,848.692 | .035 |
| Butter | .. | 1.75 | .0175 | 1.4875 | .0087 | 395.100 | .026 |
| Sugar | .. | 4 | ..... | ..... | 3.912 | 454.711 | .013 |
| Flour | 1 | 6.75 | 2.508 | .2508 | 17.0772 | 2,342.587 | .033 |
| Potatoes | 3 | 2 | 1.05 | .05 | 8.950 | 1,175.482 | .08 |
| Ham | 1 | 2 | 3.006 | 7.038 | ..... | 2,203.006 | .22 |
| Beans | .. | 8 | 1.848 | .160 | 4.736 | 807.476 | .027 |
| Corn meal | 1 | ..... | 1.472 | .608 | 11.296 | 1,644.623 | .025 |
| Total | 11 | 13 | 13.9445 | 11.0973 | 59.4119 | 11,450.464 | $0.516 |

## No. VIII.

*Breakfast.*— Fried corn meal mush (left from previous night); oatmeal with milk and sugar; bread and butter.

*Dinner.*— Stewed beef heart; boiled potatoes; bread and butter; boiled rice with milk and sugar.

*Supper.*— Hash (meat and potatoes from dinner); bread and butter; stewed prunes.

*Analysis.*

| ARTICLE. | QUANTITY. | | Proteids. Ounces. | Fats. Ounces. | Carbo-hydrates. Ounces. | Calories. | Price. |
|---|---|---|---|---|---|---|---|
| | Lbs. | Ounces. | | | | | |
| Corn meal..... | Reckoned on previous day. | | | | | | |
| Oatmeal..... | .. | 10 | 1.51 | .71 | 6.82 | 1,155.432 | $0.021 |
| Butter..... | .. | 3.25 | .0325 | 2.7625 | .0162 | 733.267 | .048 |
| S. milk..... | 3 | 10.75 | 1.821 | .411 | 2.820 | 648.433 | .064 |
| Syrup..... | .. | 3 | ..... | ..... | 2.160 | 251.067 | .011 |
| Flour..... | 1 | 2.8 | 2.068 | .2068 | 14.0812 | 1,931.602 | .027 |
| Sugar..... | .. | 13 | ..... | ..... | 12.714 | 1,484.061 | .044 |
| Beef heart..... | 2 | 2 | 7.20 | .032 | ..... | 845.328 | .12 |
| Potatoes..... | 2 | 7 | .819 | .039 | 6.981 | 916.728 | .062 |
| Rice..... | .. | 12 | .888 | .048 | 9.528 | 1,223.359 | .056 |
| Dried prunes.... | .. | 8 | .216 | .056 | 5.728 | 705.665 | .06 |
| Total..... | 12 | 7.8 | 14.5545 | 4.2653 | 60.8484 | 9,894.942 | $0.513 |

## No. IX.

*Breakfast.*— Oatmeal with milk and sugar; bread and butter.

*Dinner.*— Boiled beef; boiled potatoes; lettuce; bread and butter.

*Supper.*— Bread and butter; fried bacon; peaches cut up with sugar.

*Analysis.*

| ARTICLE. | QUANTITY. | | Proteids Ounces. | Fats. Ounces. | Carbo-hydrates. Ounces. | Calories. | Price. |
|---|---|---|---|---|---|---|---|
| | Lbs. | Ounces. | | | | | |
| Oatmeal..... | 1 | ..... | 2.416 | 1.136 | 10.912 | 1,848.692 | $0.035 |
| S. milk..... | 4 | .5 | 1.999 | .451 | 3.096 | 711.125 | .070 |
| Butter..... | .. | 2.12 | .0212 | 1.802 | .0106 | 478.803 | .031 |
| Sugar..... | .. | 9.5 | ..... | ..... | 9.301 | 1,079.823 | .032 |
| Flour..... | 2 | 2 | 3.740 | .374 | 25.466 | 3,493.366 | .049 |
| Beef..... | 2 | ..... | 6.2400 | 4.992 | ..... | 2,040.944 | .14 |
| Potatoes..... | 2 | ..... | .672 | .034 | 6.086 | 875.158 | .032 |
| Lettuce..... | 1 | 5.25 | .255 | ..... | .510 | 88.919 | .05 |
| Bacon..... | .. | 8 | .800 | 5.600 | ..... | 1,569.456 | .06 |
| Peaches..... | .. | 11.5 | .034 | .046 | 1.828 | 228.495 | .10 |
| Total..... | 14 | 6.87 | 16.1772 | 14.435 | 57.2096 | 12,414.781 | $0.599 |

## No. X.

*Breakfast.*— Oatmeal with milk and sugar; bread and butter; coffee.

*Dinner.*— Stewed mutton with onions; boiled potatoes; bread and butter.

*Supper.*— Hash (meat left from dinner); milk toast.

*Analysis.*

| ARTICLE. | QUANTITY. | | Proteids. Ounces. | Fats. Ounces. | Carbo-hydrates. Ounces. | Calories. | Price. |
|---|---|---|---|---|---|---|---|
| | Lbs. | Ounces. | | | | | |
| Coffee | .. | ..... | ..... | ..... | ..... | ..... | $0.05 |
| Oatmeal | 1 | ..... | 2.416 | 1.136 | 10.912 | 1,848.692 | .035 |
| Butter | .. | 2.25 | .0225 | 1.9125 | .0112 | 508.026 | .033 |
| S. milk | 4 | 3 | 2.077 | .469 | 3.216 | 736.513 | .073 |
| Sugar | .. | 7 | ..... | ..... | 6.846 | 795 047 | .024 |
| Flour | 2 | 9.25 | 4.5375 | .4537 | 30.8962 | 4,237.553 | .060 |
| Mutton | 2 | 13.5 | 6.825 | 7.098 | ..... | 2,664.673 | .15 |
| Potatoes | 3 | 9.5 | 1.2075 | .0575 | 10.2925 | 1,351.862 | .057 |
| Onions | .. | 11 | .154 | .033 | 1.111 | 113.626 | .05 |
| Total | 15 | 7.5 | 17.2395 | 11.1597 | 63.2849 | 12,255.992 | $0.532 |

## NO. XI.

*Breakfast.*— Bread and butter; oatmeal with milk and sugar.

*Dinner.*— Scalloped beef with rice; macaroni; boiled potatoes; bread and butter.

*Supper.*— Croquettes (meat and rice left from dinner, one egg added); potatoes stewed with milk; stewed prunes; bread and butter.

*Analysis.*

| ARTICLE. | QUANTITY. | | Proteids. Ounces. | Fats. Ounces. | Carbo-hydrates. Ounces. | Calories. | Price. |
|---|---|---|---|---|---|---|---|
| | Lbs. | Ounces. | | | | | |
| S. milk | 4 | 1 | 2.015 | .455 | 3.120 | 715.623 | $0.071 |
| Flour | 2 | 9.6 | 4.576 | .457 | 31.158 | 4,271.722 | .060 |
| Oatmeal | .. | 13 | 1.963 | .923 | 8.866 | 1,502.178 | .028 |
| Butter | .. | 4 | .04 | 3.40 | .020 | 903.401 | .06 |
| Sugar | .. | 9.25 | ..... | ..... | 9.046 | 1,051.461 | .031 |
| Beef | 2 | ..... | 6.240 | 4.992 | ..... | 2,040.944 | .14 |
| Macaroni | .. | 6 | .510 | .018 | 4.50 | 587.083 | .033 |
| Rice | .. | 4 | .296 | .016 | 3.176 | 407.554 | .018 |
| Potatoes | 2 | 12.5 | 934 | .044 | 7.965 | 1,046.073 | .044 |
| Egg | .. | 3.2 | .476 | .336 | ..... | 81.413 | .023 |
| D. prunes | .. | 8 | .216 | .056 | 6.00 | 736.584 | .06 |
| Total | 14 | 6.55 | 17.266 | 10.697 | 73.851 | 13,344.036 | $0.568 |

## No. XII.

*Breakfast* (woman and three children).— Bread and butter; oatmeal with milk and sugar.

*Lunch* (carried by man to work).— Bread and butter; cold veal (cutlets); stewed prunes (left from supper).

*Dinner.*— Picked-up codfish with milk gravy; boiled potatoes; bread and butter; rice pudding.

*Supper.*— Fried corn meal mush with syrup; bread and butter.

*Analysis.*

| ARTICLE. | QUANTITY. | | Proteids. Ounces. | Fats. Ounces. | Carbohydrates. Ounces. | Calories. | Price. |
|---|---|---|---|---|---|---|---|
| | Lbs. | Ounces. | | | | | |
| Oatmeal | .. | 10 | 1.51 | .71 | 6.82 | 1,155.432 | $0.021 |
| Flour | 1 | 14.6 | 3.366 | .336 | 22.919 | 3,143.241 | .044 |
| Butter | .. | 3.75 | .037 | 3.187 | .018 | 847.452 | .056 |
| S. milk | 4 | 10.5 | 2.309 | .521 | 3.576 | 819.183 | .081 |
| Sugar | .. | 9.25 | ..... | ..... | 9.046 | 1,051.461 | .031 |
| Veal cutlets | .. | 8 | 1.464 | .440 | ..... | 285.711 | .09 |
| Codfish | .. | 7 | 1.106 | .028 | ..... | 135.240 | .052 |
| Potatoes | 2 | 1 | .693 | .033 | 5.907 | 788.351 | .033 |
| Rice | .. | 2.5 | .185 | .010 | 1.985 | 278.595 | .011 |
| Corn meal | .. | 15 | 1.380 | .570 | 10.590 | 1,541.616 | .023 |
| Syrup | .. | 5.5 | ..... | ..... | 3.960 | 460.290 | .020 |
| Total | 12 | 7.10 | 12.050 | 5.835 | 64.821 | 10,506.572 | $0.462 |

## No. XIII.

*Breakfast* (woman and three children).— Bread and butter; oatmeal with milk and sugar.

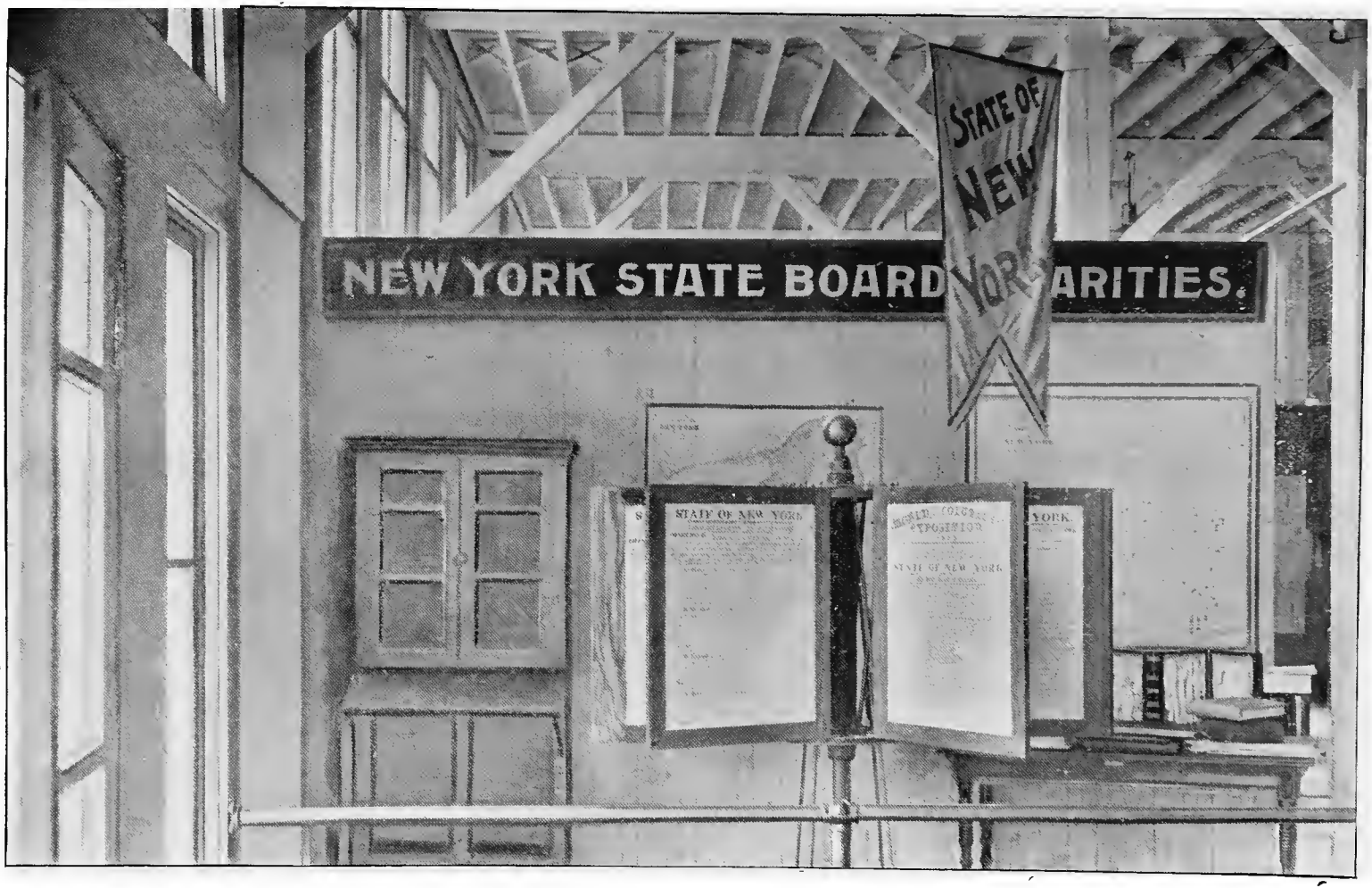
*Lunch* (carried by man to work).— Bread and butter; cold veal (cutlets); cheese.

*Dinner.*— Corned beef; cabbage; boiled potatoes; bread.

*Supper.*— Stewed potatoes; milk toast.

*Analysis.*

| ARTICLE. | QUANTITY. | | Proteids. Ounces. | Fats. Ounces. | Carbohydrates. Ounces. | Calories. | Price. |
|---|---|---|---|---|---|---|---|
| | Lbs. | Ounces. | | | | | |
| S. milk | 4 | 5 | 2.139 | .483 | 3.312 | 760.035 | $0.075 |
| Sugar | .. | 5.75 | ..... | ..... | 5.623 | 653.240 | .019 |
| Flour | 1 | 12.4 | 3.124 | .312 | 21.271 | 2,918.394 | .041 |
| Oatmeal | .. | 7.5 | 1.132 | .532 | 5.115 | 866.384 | .016 |
| Butter | .. | 2 | .02 | 1.70 | .010 | 451.700 | .03 |
| Veal cutlet | .. | 6.5 | 1.189 | .357 | ..... | 147.547 | .08 |
| Cheese | .. | 2.5 | .677 | .887 | .005 | 319.500 | .018 |
| Corned beef | 1 | 5 | 2.793 | 5.586 | ..... | 1,795.490 | .131 |
| Potatoes | 3 | 12.5 | 1.270 | .060 | 10.829 | 1,422.262 | .060 |
| Cabbage | 1 | 9 | .525 | .075 | 1.375 | 240.620 | .08 |
| Total | 14 | 4.15 | 12.869 | 9.992 | 47.540 | 9,575.172 | $0.550 |




STATE BOARD OF CHARITIES EXHIBIT

## No. XIV.

*Breakfast* (woman and three children).— Oatmeal with milk and sugar; bread and butter

*Lunch* (carried by man to work).— Corned beef sandwiches; cheese; apple sauce.

*Dinner* — Boiled beef with gravy; boiled potatoes; corn starch pudding with hot sauce.

*Supper.*— Corned beef hash; bread and butter.

*Analysis.*

| ARTICLE. | QUANTITY. | | Proteids. Ounces. | Fats. Ounces. | Carbohydrates. Ounces. | Calories. | Price. |
|---|---|---|---|---|---|---|---|
| | Lbs. | Ounces. | | | | | |
| Flour | 1 | 8.8 | 2.728 | .272 | 18.575 | 2,547.519 | $0.036 |
| Butter | .. | 3.25 | .032 | 2.762 | .016 | 733.267 | .048 |
| Corned beef | 1 | 5 | 2.793 | 5.586 | ..... | 1,795.490 | .131 |
| Cheese | .. | 2.5 | .677 | .887 | .005 | 319.500 | .018 |
| Apples | .. | 14.5 | .029 | .058 | 2.305 | 42.375 | Given. |
| S. milk | 4 | 9.5 | 2.278 | .514 | 3.528 | 809.681 | .080 |
| Sugar | .. | 9.5 | ..... | ..... | 9.291 | 1,079.823 | .032 |
| Oatmeal | .. | 8 | 1.208 | .568 | 5.456 | 921.771 | .017 |
| Corn starch | .. | 2.5 | ..... | ..... | 2.445 | 284.194 | .012 |
| Beef | 2 | 1 | 6.435 | 5.148 | ..... | 2,105.213 | .127 |
| Potatoes | 4 | 1.5 | 1.375 | .065 | 11.724 | 1,539.815 | .065 |
| Total | 16 | 2.05 | 17.555 | 15.860 | 53.345 | 12,178.648 | $0.566 |

## No. XV.

*Breakfast* (woman and three children).— Oatmeal with milk and sugar; bread and butter.

*Lunch* (carried by man to work).— Bread and butter; cold beef; apple sauce.

*Dinner.*— Minced beef with gravy; boiled potatoes; bread and butter.

*Supper.*— French fried potatoes; bacon; dried beef; bread and butter.

*Analysis.*

| ARTICLE. | QUANTITY. | | Proteids. Ounces. | Fats. Ounces. | Carbohydrates. Ounces. | Calories. | Price. |
|---|---|---|---|---|---|---|---|
| | Lbs. | Ounces. | | | | | |
| Flour | 2 | 4.8 | 4.048 | .404 | 27.563 | 3,793.204 | $0.023 |
| Butter | .. | 4.5 | .045 | 3.825 | .022 | 1,014.950 | .067 |
| Beef | 1 | 8.25 | 4.728 | 3.783 | ..... | 2,011.566 | .11 |
| Apples | .. | 15.5 | .031 | .062 | 2.464 | 305.771 | Given. |
| Oatmeal | .. | 8 | 1.208 | .568 | 5.456 | 921.771 | .017 |
| S. milk | 4 | 13.5 | 2.402 | .542 | 3.720 | 854.258 | .085 |
| Sugar | .. | 7.25 | ..... | ..... | 7.090 | 824.105 | .024 |
| Potatoes | 3 | 15.75 | 1.338 | .063 | 11.411 | 1,561.106 | .063 |
| Bacon | .. | 7 | .700 | 4.900 | ..... | 1,373.273 | .07 |
| Dried beef | .. | 4 | 1.152 | .176 | ..... | 180.073 | .045 |
| Total | 15 | 8.55 | 15.652 | 14.323 | 57.726 | 12,840.077 | $0.504 |

## No. XVI.

*Breakfast.*— Oatmeal with milk and sugar; bread and butter· dried beef.

*Dinner.*— Salt pork with baked beans; boiled potatoes; bread; boiled rice with syrup.

*Supper.*— Potatoes stewed with milk; apple sauce; bread and butter: bananas (6).

*Analysis.*

| ARTICLE. | QUANTITY. | | Proteids. Ounces. | Fats. Ounces. | Carbo-hydrates. Ounces. | Calories. | Price. |
|---|---|---|---|---|---|---|---|
| | Lbs. | Ounces. | | | | | |
| S. milk..... | 3 | 13.25 | 1.898 | .428 | 2.940 | 675.421 | $0.067 |
| Sugar..... | .. | 10.5 | ..... | ..... | 10.269 | 631.243 | .035 |
| Flour..... | 3 | .8 | 5.368 | .536 | 36.551 | 5,013.890 | .071 |
| Butter..... | .. | 4.25 | .042 | 3.612 | .021 | 959.116 | .063 |
| Oatmeal..... | .. | 14 | 2.114 | .994 | 9.548 | 1,617.372 | .030 |
| Salt pork..... | .. | 5 | .045 | 4.140 | ..... | 1,096.762 | .031 |
| Potatoes..... | 3 | 5 | 1.113 | .053 | 9.487 | 1,246.064 | .053 |
| Rice..... | .. | 6 | .444 | .024 | 4.764 | 610.749 | .026 |
| Beans..... | .. | 13 | 7.161 | .260 | 7.696 | 1,794.640 | .044 |
| Syrup..... | .. | 3.5 | ..... | ..... | 2.520 | 292.787 | .012 |
| Dried apples.... | .. | 4 | .048 | ..... | 2.220 | 263.853 | .02 |
| Raisins..... | .. | 2 | .540 | .014 | 1.432 | 232.673 | .015 |
| Bananas..... | .. | 15 | .210 | .210 | 4.470 | 549.516 | .05 |
| Dried beef..... | .. | 2.5 | .720 | .110 | ..... | 112.691 | .027 |
| Total..... | 15 | 2.8 | 19.703 | 10.381 | 91.918 | 15,096.777 | $0.544 |

## No. XVII.

*Breakfast.*— Oatmeal with milk and sugar; bread and butter.

*Dinner.*— Stewed mutton; boiled potatoes; string beans; bread and butter.

*Supper.*— Mutton hash; apple sauce; bread and butter.

*Analysis.*

| ARTICLE. | QUANTITY. | | Proteids. Ounces. | Fats. Ounces. | Carbo-hydrates. Ounces. | Calories. | Price. |
|---|---|---|---|---|---|---|---|
| | Lbs. | Ounces. | | | | | |
| Oatmeal..... | .. | 14 | 2.114 | .994 | 9.548 | 1,617.372 | $0.030 |
| Sugar..... | .. | 8.5 | ..... | ..... | 8.313 | 965.912 | .029 |
| Flour..... | 1 | 13.6 | 3.256 | .325 | 22.170 | 3,040.381 | .043 |
| Butter..... | .. | 3.25 | .032 | 2.762 | .016 | 733.267 | .048 |
| S. milk..... | 2 | .5 | 1.007 | .227 | 1.560 | 358.202 | .035 |
| String beans.... | 1 | 15 | .682 | .124 | 2.914 | 451.133 | .10 |
| Mutton..... | 3 | ..... | 7.20 | 8.448 | ..... | 3,062.140 | .24 |
| Potatoes..... | 2 | 8 | .840 | .040 | 7.160 | 972.842 | .04 |
| D. apples..... | .. | 4 | .048 | ..... | 2.220 | 263.853 | .02 |
| Raisins..... | .. | 2 | .540 | .014 | 1.432 | 232.673 | .015 |
| Total..... | 13 | 4.85 | 15.719 | 12.934 | 55.333 | 11,697.775 | $0.600 |

## No. XVIII.

*Breakfast.*— Oatmeal with milk and sugar; bread and butter; coffee.

*Dinner.*— Beef stew; raw onions cut up with vinegar; boiled potatoes; bread.

*Supper.*— Milk toast; tea with milk and sugar.

*Analysis.*

| ARTICLE. | QUANTITY. | | Proteids. Ounces. | Fats. Ounces. | Carbo-hydrates. Ounces. | Calories. | Price. |
|---|---|---|---|---|---|---|---|
| | Lbs. | Ounces. | | | | | |
| Oatmeal | 1 | ..... | 2.416 | 1.136 | 10.912 | 1,848.692 | $0.035 |
| Flour | 3 | .8 | 5.368 | .536 | 36.551 | 5,013.890 | .072 |
| Sugar | .. | 7.5 | ..... | ..... | 7.335 | 852.583 | .024 |
| Butter | .. | 3.25 | .032 | 2.762 | .016 | 733.267 | .048 |
| S. milk | 4 | 2 | 2.046 | .462 | 3.168 | 727.392 | .072 |
| Beef | 2 | ..... | 6.240 | 4.992 | ..... | 2,040.944 | .160 |
| Onions | .. | 4.5 | .063 | .013 | .454 | 63.519 | .012 |
| Potatoes | 2 | 6 | .798 | .038 | 6.802 | 777.169 | .038 |
| Coffee | .. | ..... | ..... | ..... | ..... | ..... | .05 |
| Vinegar | .. | ..... | ..... | ..... | ..... | ..... | .01 |
| Tea | .. | ..... | ..... | ..... | ..... | ..... | .05 |
| Total | 13 | 8.05 | 16.963 | 9.939 | 65.238 | 12,057.456 | $0.571 |

## No. XIX.

*Breakfast.*— Oatmeal with milk and sugar; bread and butter; coffee.

*Dinner.*— Picked-up codfish with milk gravy; mashed pototoes; bread and butter.

*Supper.*— Codfish balls; raw onions; bread and butter.

*Analysis.*

| ARTICLE. | QUANTITY. | | Proteids. Ounces. | Fats. Ounces. | Carbo-hydrates. Ounces. | Calories. | Price. |
|---|---|---|---|---|---|---|---|
| | Lbs. | Ounces. | | | | | |
| Oatmeal | 1 | ..... | 2.416 | 1.136 | 10.912 | 1,848.692 | $0.035 |
| Sugar | .. | 7.5 | ..... | ..... | 7.335 | 852.583 | .024 |
| Flour | 1 | 14.6 | 3.366 | .336 | 22.919 | 3,143.243 | .044 |
| Butter | .. | 4.25 | .042 | 3.612 | .021 | 959.116 | .063 |
| W. milk | 1 | 13.75 | 1.071 | 1.190 | 1.398 | 1,238.894 | .053 |
| Potatoes | 4 | 1 | 1.344 | .064 | 11.456 | 1,504.681 | .064 |
| Codfish | .. | 14.5 | 2.291 | .058 | ..... | 281.470 | .108 |
| S. milk | 1 | 13.5 | .914 | .208 | 1.416 | 325.667 | .032 |
| Onions | .. | 4 | .056 | .012 | .404 | 8.510 | .05 |
| Coffee | .. | ..... | ..... | ..... | ..... | ..... | .05 |
| Total | 12 | 9.10 | 11.500 | 6.616 | 55.861 | 10,162.856 | $0.523 |

## No. XX.

*Breakfast.*— Oatmeal with milk and sugar; bread and butter.

*Dinner.*— Fried liver and bacon; boiled potatoes; boiled beets; bread and butter.

*Supper.*— Potatoes stewed with milk; bananas (6) cut up with sugar; dried beef; bread and butter.

*Analysis.*

| ARTICLE. | QUANTITY. | | Proteids. Ounces. | Fats. Ounces. | Carbo-hydrates. Ounces. | Calories. | Price. |
|---|---|---|---|---|---|---|---|
| | Lbs. | Ounces. | | | | | |
| Oatmeal ..... | 1 | ..... | 2.416 | 1.136 | 10.912 | 1,848.692 | $0.035 |
| S. milk ..... | 3 | 14.5 | 1.937 | .437 | 3.000 | 626.546 | .068 |
| Sugar ..... | .. | 6.5 | ..... | ..... | 6.357 | 738.906 | .022 |
| Flour..... | 2 | 2.8 | 3.828 | .382 | 26.065 | 3,574.852 | .050 |
| Butter..... | .. | 6.25 | .062 | 5.312 | .031 | 1,410.817 | .093 |
| Cow's liver..... | 2 | ..... | 6.432 | 1.728 | 1.120 | 1,331.060 | .10 |
| Bacon ..... | .. | 5.75 | .575 | 4.025 | ..... | 1,128.046 | .057 |
| Beets..... | 1 | 15 | .390 | ..... | 2.511 | 337.081 | .10 |
| Potatoes ..... | 3 | ..... | 1.008 | .048 | 8.592 | 1,128.511 | .048 |
| Bananas ..... | .. | 14.5 | .203 | .203 | 4.321 | 578.903 | .05 |
| Dried beef ..... | .. | 2.5 | .720 | .110 | ..... | 112.629 | .027 |
| Total ..... | 16 | 3.8 | 17.571 | 13.381 | 62.909 | 12,816.043 | $0.650 |

## No. XXI.

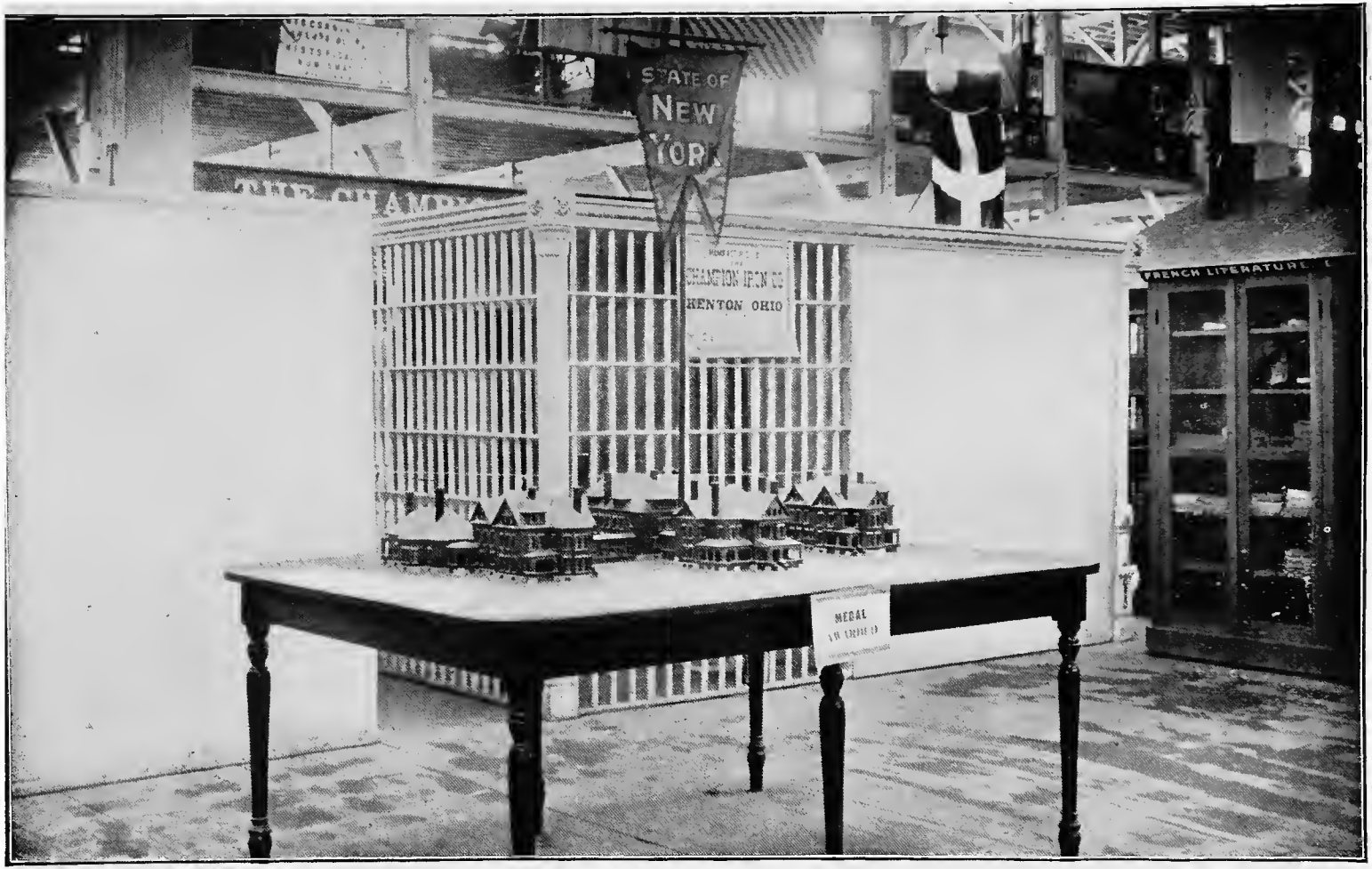
*Breakfast.*— Oatmeal with milk and sugar; bread and butter.

*Dinner.*— Roast mutton; boiled potatoes; raw onions; beets (cold, left over).

*Supper.*— Corn meal mush with milk and sugar; bread and butter; dried beef.

*Analysis.*

| ARTICLE. | QUANTITY. | | Proteids. Ounces. | Fats. Ounces. | Carbo-hydrates. Ounces. | Calories. | Price. |
|---|---|---|---|---|---|---|---|
| | Lbs. | Ounces. | | | | | |
| Flour..... ... | 1 | 1.45 | 1.919 | .191 | 13.080 | 1,793.883 | $0.025 |
| Sugar ..... | .. | 5.25 | ..... | ..... | 5.134 | 596.750 | .016 |
| Butter..... | .. | 2.75 | .027 | 2.337 | .013 | 620.811 | .040 |
| S. milk ..... | 4 | 10.25 | 2.301 | .519 | 3.564 | 817.973 | .081 |
| Oatmeal ..... | 1 | ..... | 2.416 | 1.136 | 10.912 | 1,848.692 | .035 |
| Mutton ..... | 1 | 15.5 | 4.725 | 4.914 | ..... | 1,843.275 | .275 |
| Potatoes ..... | 2 | 2 | .714 | .024 | 6.086 | 799.362 | .034 |
| Beets. ..... | .. | 2.25 | .028 | ..... | .182 | 24.409 | |
| Onion..... | .. | 2 | .028 | .006 | .202 | 62.222 | |
| Corn meal ..... | .. | 14 | 1.288 | .532 | 9.884 | 1,392.494 | .021 |
| Dried beef ..... | .. | 2 | .576 | .088 | ..... | 90.617 | .022 |
| Total ..... | 12 | 9.45 | 14.022 | 9.747 | 49.057 | 9,890.488 | $0.549 |




LETCHWORTH MODEL ALMSHOUSE

## No. XXII.

*Breakfast.*— Oatmeal with milk and sugar; bread and butter.

*Dinner.*— Cold mutton; boiled potatoes; raw onions; bread and butter; boiled rice with milk and sugar.

*Supper.*— Pea soup; French fried potatoes; bread and butter.

*Analysis.*

| ARTICLE. | QUANTITY | | Proteids. Ounces. | Fats. Ounces. | Carbohydrates. Ounces. | Calories. | Price. |
|---|---|---|---|---|---|---|---|
| | Lbs. | Ounces. | | | | | |
| Oatmeal | .. | 15 | 2.265 | 1.065 | 10.230 | 1,732.567 | $0.031 |
| Sugar | .. | 9.75 | ..... | ..... | 9.535 | 1,108.300 | .033 |
| S. milk | 3 | 5.5 | 1.658 | .374 | 2.568 | 589.118 | .058 |
| Butter | .. | 3.25 | .032 | 2.762 | .016 | 733.267 | .048 |
| Flour | 1 | 3.6 | 2.156 | .215 | 14.680 | 2.012.920 | .028 |
| Mutton | 1 | 3.25 | 2.887 | 3.003 | ..... | 1,127.674 | .10 |
| Onions | .. | 11 | .154 | .033 | 1.111 | 155.737 | .029 |
| Rice | .. | 8 | .592 | .032 | 6.352 | 815.107 | .037 |
| Potatoes | 3 | 15 | 1.323 | .063 | 11.277 | 1,481.171 | .063 |
| Dried peas | .. | 4 | 1.608 | .068 | 2.256 | 466.695 | .008 |
| Total | 12 | 14.35 | 12.675 | 7.615 | 58.025 | 10,222.556 | $0.435 |

## No. XXIII.

*Breakfast.*— Oatmeal with milk and sugar; bread and butter.

*Dinner.*— Baked pork and beans; fried potatoes; bread and butter.

*Supper.*— Bread and butter; bananas (12) with sugar; cold veal.

*Analysis.*

| ARTICLE. | QUANTITY. | | Proteids. Ounces. | Fats. Ounces. | Carbohydrates. Ounces. | Calories. | Price. |
|---|---|---|---|---|---|---|---|
| | Lbs. | Ounces. | | | | | |
| Oatmeal | .. | 12.5 | 1.887 | .887 | 8.525 | 1,442.122 | $0.027 |
| Whole milk | 1 | 13 | 1.044 | 1.160 | 1.363 | 584.803 | .052 |
| Sugar | .. | 9.5 | ..... | ..... | 9.291 | 1,079.823 | .032 |
| Flour | 2 | 7.6 | 4.356 | .435 | 29.660 | 4,066.424 | .056 |
| Bacon | .. | 4.5 | .450 | 2.950 | ..... | 830.088 | .045 |
| Veal | .. | 5 | .830 | .395 | ..... | 199.300 | .055 |
| Potatoes | 2 | 3.5 | .745 | .035 | 6.354 | 834.496 | .035 |
| Butter | .. | 1.25 | .012 | 1.062 | .006 | 281.566 | .018 |
| Dried beans | .. | 6 | 1.386 | .120 | 3.552 | 604.677 | .020 |
| Salt pork | .. | 3 | .027 | 2.484 | ..... | 657.002 | .018 |
| Bananas | 1 | 9.5 | .357 | .357 | 7.599 | 1,016.347 | .10 |
| S. milk | 2 | 5.75 | 1.170 | .264 | 1.812 | 414.930 | .041 |
| Total | 12 | 15.1 | 12.264 | 10.149 | 68.162 | 12,011.578 | $0.499 |

## No. XXIV.

*Breakfast.*— Fried corn meal mush with syrup; cold beans; bread and butter.

*Dinner.*— Boiled beef with potatoes and onions; bread and butter.

*Supper.*— Cold beef; fried potatoes; bread and butter.

*Analysis.*

| ARTICLE. | QUANTITY. | | Proteids. Ounces. | Fats. Ounces. | Carbo-hydrates. Ounces. | Calories. | Price. |
|---|---|---|---|---|---|---|---|
| | Lbs. | Ounces. | | | | | |
| Corn meal | 1 | ..... | 1.472 | .608 | 11.296 | 1,644.623 | $0.025 |
| Sugar | .. | 7 | ..... | ..... | 6.346 | 795.047 | .024 |
| Syrup | .. | 4.25 | ..... | ..... | 3.060 | 355.679 | .015 |
| Butter | .. | 3.75 | .037 | 3.187 | .018 | 847.452 | .055 |
| S. milk | 3 | 4.75 | 1.635 | .369 | 2.532 | 581.089 | .058 |
| Flour | 1 | 14.3 | 3.333 | .333 | 22.694 | 3,111.440 | .044 |
| Beats | .. | 10 | 2.310 | .200 | 5.920 | 1,009.345 | .034 |
| Onions | 1 | ..... | .224 | .048 | 1.616 | 226.527 | .05 |
| Potatoes | 4 | ..... | 1.344 | .064 | 11.456 | 1,504.681 | .064 |
| Beef | 3 | ..... | 9.36 | 7.488 | ..... | 3,060.099 | .25 |
| Total | 15 | 12.05 | 19.715 | 12.297 | 64.938 | 13,135.982 | $0.619 |

## No. XXV.

*Breakfast.* —Oatmeal with milk and sugar; bread and butter.

*Dinner.*— Boiled mutton with rice; mashed potatoes; bread and butter; corn starch pudding with milk and sugar,

*Supper.*— Stewed potatoes; dried apple sauce; bread and butter.

*Analysis.*

| ARTICLE. | QUANTITY. | | Proteids. Ounces. | Fats, Ounces. | Carbo-hydrates. Ounces. | Calories. | Price. |
|---|---|---|---|---|---|---|---|
| | Lbs. | Ounces. | | | | | |
| Oatmeal | 1 | ..... | 2.416 | 1.136 | 10.912 | 1,848.692 | $0.035 |
| Butter | .. | 3.5 | .035 | 2.975 | .017 | 789.099 | .052 |
| S. milk | 6 | 2 | 3.038 | .686 | 4.704 | 1,078.944 | .107 |
| Flour | 1 | 14.4 | 3.344 | .334 | 22.769 | 3,121.901 | .044 |
| Sugar | .. | 7 | ..... | ..... | 6.846 | 795.047 | .023 |
| Corn starch | .. | 2 | ..... | ..... | 1.956 | 226.658 | .01 |
| Mutton | 1 | 8.5 | 1.225 | 1.372 | ..... | 503.014 | .16 |
| Rice | .. | 4 | .296 | .016 | 3.176 | 407.553 | .018 |
| Potatoes | 4 | ..... | 1.344 | .064 | 11.456 | 1,504.681 | .064 |
| Dried apples | .. | 8 | .096 | ..... | 4.440 | 526.544 | .04 |
| Raisins | .. | 4 | .108 | .028 | 2.864 | 352.600 | .03 |
| Total | 16 | 5.4 | 11.902 | 6.611 | 69.140 | 11,154.733 | $0.583 |

## No. XXVI.

*Breakfast.*— Oatmeal with milk and sugar; bread and butter.

*Dinner.*— Picked-up codfish with milk; boiled potatoes; bread and butter.

*Supper.*— Codfish balls; bananas (6) with sugar; bread and butter.

*Analysis.*

| ARTICLE. | QUANTITY. | | Proteids. Ounces. | Fats. Ounces. | Carbo-hydrates. Ounces. | Calories. | Price |
|---|---|---|---|---|---|---|---|
| | Lbs. | Ounces. | | | | | |
| S. milk | 6 | 8 | 3.224 | .728 | 4.992 | 1,144.120 | $0.114 |
| Sugar | .. | 7.75 | ..... | ..... | 7.579 | 881.061 | .026 |
| Butter | .. | 4 | .04 | 3.40 | .020 | 903.401 | .06 |
| Flour | 1 | 9.5 | 2.805 | .280 | 19.099 | 2,618.369 | .037 |
| Oatmeal | 1 | ..... | 2.416 | 1.136 | 10.912 | 1,848.692 | .036 |
| Codfish | .. | 10.5 | 1.659 | .042 | ..... | 214.023 | .078 |
| Potatoes | 3 | 10 | 1.218 | .058 | 10.382 | 1,363.617 | .058 |
| Bananas | 1 | 1.25 | .221 | .221 | 5.140 | 681.023 | .05 |
| Total | 15 | 3 | 11.583 | 5.865 | 58.124 | 9,654.306 | $0.458 |

## No. XXVII.

*Breakfast.*— Oatmeal with milk and sugar; bread and butter.

*Dinner.*— Corned beef; boiled cabbage; bread and butter.

*Supper.*— Stewed potatoes; cabbage soup; bread.

*Analysis.*

| ARTICLE. | QUANTITY. | | Proteids. Ounces. | Fats. Ounces. | Carbo-hydrates. Ounces. | Calories. | Price. |
|---|---|---|---|---|---|---|---|
| | Lbs. | Ounces. | | | | | |
| Oatmeal | .. | 10.75 | 1.623 | .763 | 7.331 | 1,240.681 | $0.023 |
| S. milk | 4 | 8.75 | 2.255 | .509 | 3.492 | 799.016 | .080 |
| Butter | .. | 3 | .030 | 2.55 | .015 | 677.550 | .045 |
| Sugar | .. | 8.5 | ..... | ..... | 8.313 | 965.912 | .029 |
| Flour | 2 | 6.9 | 4.279 | .427 | 29.136 | 3,994.146 | .056 |
| Corned beef | 2 | 4 | 4.788 | 9.576 | ..... | 3,078 781 | .225 |
| Cabbage | 3 | 5.5 | 1.123 | .150 | 2.942 | 511.462 | .10 |
| Potatoes | 2 | 10 | .882 | .042 | 7.518 | 987.447 | .042 |
| Total | 16 | 9.4 | 14.980 | 14.017 | 58.747 | 12,254.995 | $0.600 |

## No. XXVIII.

*Breakfast.*— Oatmeal with milk and sugar ; bread and butter.

*Dinner.*— Cold corned beef ; boiled potatoes ; string beans ; bread and butter.

*Supper.* —Stewed potatoes ; bread and butter.

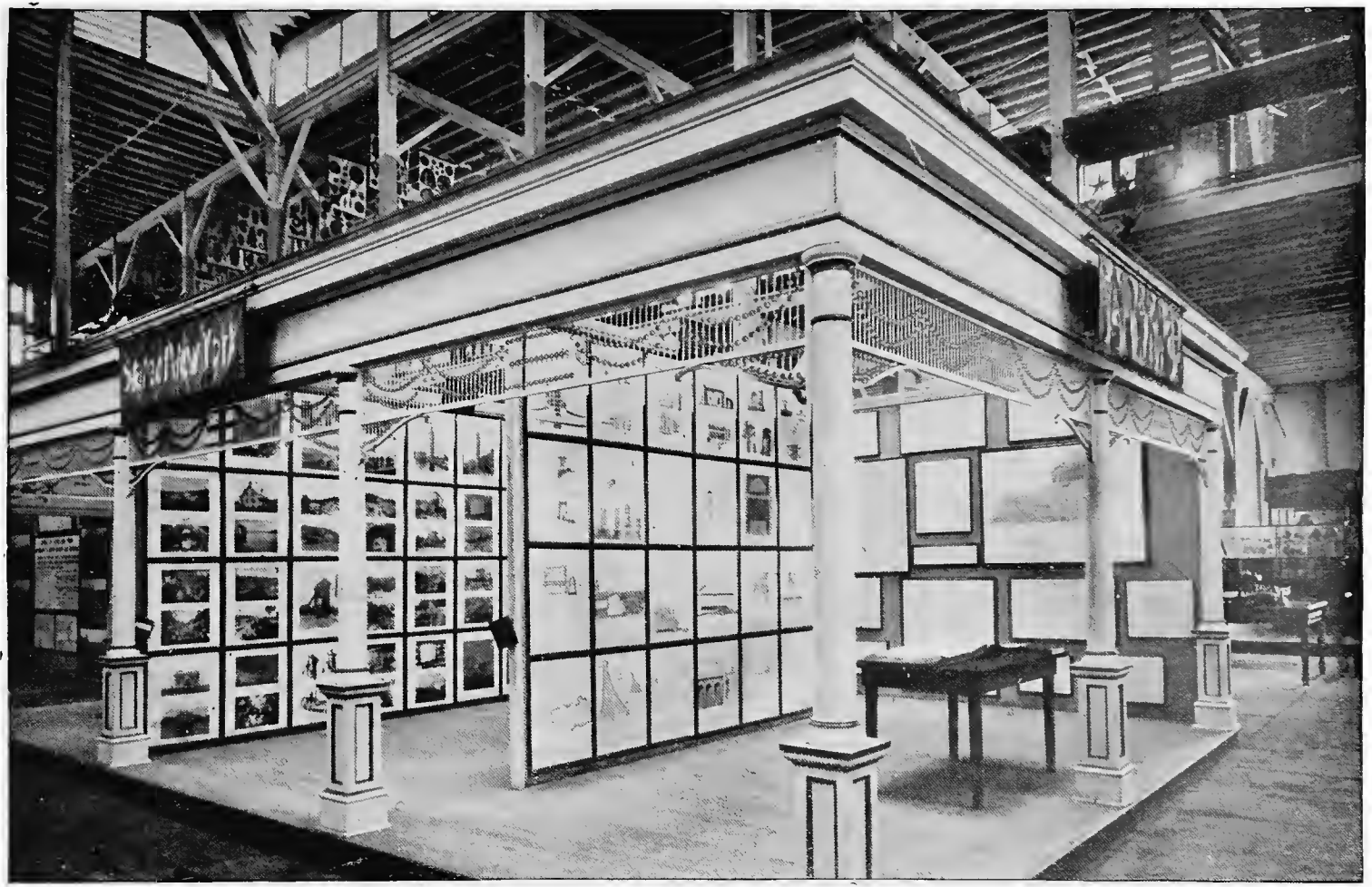
*Analysis.*

| ARTICLE. | QUANTITY. | | Proteids. Ounces. | Fats. Ounces. | Carbo-hydrates. Ounces. | Calorie | Price. |
|---|---|---|---|---|---|---|---|
| | Lbs. | Ounces. | | | | | |
| Oatmeal..... | .. | 14 | 2.114 | .994 | 9.548 | 1,617.372 | $0.030 |
| Flour..... | 2 | 4.6 | 4.026 | .402 | 27.413 | 3,758.728 | .053 |
| Butter..... | .. | 3 25 | .032 | 2.762 | .016 | 733.267 | .048 |
| S. milk..... | 3 | 6.75 | 1.697 | .383 | 2.628 | 601.161 | .060 |
| Sugar ..... | .. | 9 | ..... | ..... | 8.802 | 1,022.868 | .030 |
| Onions ..... | .. | 2.5 | .035 | .007 | .252 | 35.553 | .01 |
| Potatoes..... | 3 | 6.5 | 1.144 | .054 | 9.755 | 1,281.198 | .054 |
| String beans.... | 1 | 2.5 | .407 | .074 | 1.739 | 268.254 | .10 |
| Corned beef..... | 2 | 4 | 4.788 | 9.576 | ..... | 3,078.781 | .225 |
| Total ..... | 14 | 5.1 | 14.243 | 14.252 | 60.153 | 12,397.182 | $0.610 |

SUMMARY.

*Total food consumed during July*, 1893.

| ARTICLE. | Pounds. | Proteids. Pounds. | Fats. Pounds. | Carbo-hydrates. Pounds. | Calories. |
|---|---|---|---|---|---|
| Beef, shoulder..... | 18.75 | 3.6562 | 2.9250 | ..... | 19,125.00 |
| Mutton ..... ..... | 13.70 | 2.3153 | 3.9319 | ..... | 20,892.50 |
| Corned beef..... | 9.00 | 1.1970 | 2.3940 | ..... | 12,330.00 |
| Liver ..... | 2.81 | .5648 | .1517 | .0983 | 1,873.34 |
| Bacon ..... | 2.54 | .2540 | 1.7780 | ..... | 7,518.40 |
| Salt pork ..... ..... | .79 | .0237 | .6162 | ..... | 2,496.40 |
| Ham ..... | 1.25 | .2087 | .4887 | ..... | 2,450.00 |
| Beef heart ..... | 2.25 | .4050 | .1800 | ..... | 1,512.53 |
| Veal..... | .81 | .1636 | .0793 | .... ... | 639.90 |
| Dried beef ..... | .68 | .1958 | .0299 | ..... | 487.48 |
| Codfish (salt)..... | 2.40 | .5136 | .0072 | ..... | 984.00 |
| Herring (dried)..... | .15 | .0546 | .0237 | ..... | 201.75 |
| | 55.13 | 9.5523 | 12.6056 | .0983 | 70,511.30 |
| Butter..... | 5.63 | .0563 | 4.7855 | .0281 | 20,352.45 |
| Whole milk ..... | 18.32 | .6228 | .6778 | .8793 | 5,679.20 |
| Skim milk ..... | 98.38 | 3.0497 | .6886 | 4.7222 | 17,216.50 |
| Eggs ..... | 1.20 | .1788 | .1260 | .0048 | 865.20 |
| Cheese..... | .71 | .2009 | .2520 | .0127 | 1,469.70 |
| | 124.24 | 4.1085 | 6.5299 | 5.6471 | 45,583.05 |
| Total animal food ..... | 179.37 | 13.6608 | 19.1355 | 5.7454 | 116,094.35 |



STATE BOARD OF HEALTH EXHIBIT

SUMMARY — *Continued.*

| ARTICLE. | Pounds. | Proteids. Pounds. | Fats. Pounds. | Carbohydrates. Pounds. | Calories. |
|---|---|---|---|---|---|
| Flour | 54.48 | 5.9928 | .5992 | 40.8055 | 89,565.12 |
| Oatmeal | 21.12 | 3.1898 | 1.4998 | 14.8072 | 39,081.25 |
| Rice | 2.81 | .2079 | .0112 | 2.2311 | 4,580.30 |
| Hominy | 1.00 | .1400 | .0700 | .6333 | 1,650.00 |
| Corn meal | 6.75 | .6210 | .2565 | 4 7655 | 11,103.75 |
| Cracked wheat | .59 | .0826 | .0413 | .3736 | 973.50 |
| Corn starch | .45 | ..... | ..... | .4401 | 818.48 |
| | 87.20 | 10.2341 | 2.4780 | 64.0563 | 147,772.40 |
| Potatoes | 82.67 | 1.7360 | .0826 | 14.7979 | 31,001.25 |
| Cabbage | 7.00 | .1470 | .0210 | .3850 | 1,085.00 |
| Lettuce | 1.50 | .0187 | ..... | .0375 | 104.61 |
| Dried peas | .75 | .2002 | .0127 | .4230 | 1,173.75 |
| Dried beans | 3.81 | .8801 | .0762 | 2.2555 | 6,153.15 |
| Onions | 4.71 | .0659 | .0141 | .4757 | 1,059.75 |
| Beets | 1.15 | .0213 | .0048 | .0822 | 184.00 |
| Stringed beans | 3.09 | .0679 | .0123 | .2793 | 726.15 |
| | 104.68 | 3.1371 | .2237 | 18.7361 | 41,487.66 |
| Bananas | 5.42 | .1029 | .0325 | 1.2628 | 2,682.90 |
| Dried apples | 1.00 | .0125 | ..... | .5550 | 1,056.41 |
| Apples | 5.10 | .0204 | ..... | .7293 | 1,402.50 |
| Dried prunes | .50 | .0135 | .0035 | .3580 | 705.66 |
| Raisins | 1.00 | .0270 | .0070 | .7160 | 1,411.33 |
| Peaches | .71 | .0021 | .0028 | .1128 | 225.55 |
| | 13.73 | .1784 | .0458 | 3.7339 | 7,484.35 |
| Sugar | 14.25 | ..... | ..... | 13.9365 | 27,700.85 |
| Syrup | 1.62 | ..... | ..... | 1.1842 | 2,203.20 |
| Macaroni | .50 | .045 | .0025 | .3825 | 805.59 |
| | 16.37 | .045 | .0025 | 15.5032 | 30,709.64 |
| Total vegetable food | 221.98 | 13.5946 | 2.7500 | 102.0295 | 227,454.05 |
| Total food 3.45 men 28 days | 401.35 | 27.2554 | 21.8865 | 107.7749 | 343,548.40 |
| For 1 man 1 day | 4.15 | .28 | .226 | 1.11 | 3,556.4 |
| | Grams. | Grams. | Grams. | Grams. | |
| For 1 man 1 day | 1,882.44 | 127 | 102.51 | 503.49 | 3,556.4 |
| Voit's standard | ..... | 118 | 56 | 500 | 3,050.0 |
| American standard | ..... | 125 | 125 | 450 | 3,520.0 |

| | |
|---|---|
| Cost for twenty-eight days | $15.109 |
| Cost for one day | .539 |
| Average cost for one man one day | .156 |
| Average cost for one individual | .107 |

## CONCLUSION.

What the Workingman's Model Home attempted to do as an exhibit has been outlined in the foregoing pages. Perhaps a word is in place as to what it did *not* attempt to do. Among the many visitors to the house were those who severely criticized because no complete scheme of living was outlined. "How are you going to educate your children?" "Where is the money coming from for church, club, newspaper and amusements?" "What is the family to do in case of long and severe illness?" "What scheme have you devised for laying aside money for old age?" These are only a few of the questions asked. And they are all important questions. They must be met and answered in some way by every family whose intelligence causes them to aim higher than at the gratification of merely animal needs.

And only $500 a year on which to do all this!

Let these who criticise try to answer. Every trial may help toward a solution. True, we *can* spend less than $120 per year for rent. But can we do it in our cities without sacrificing the conveniences, fresh air, sunlight, room for privacy and all that respectable quarters contribute toward health and morality? We *can* live and perhaps not suffer from the cold by spending less than $100 a year for clothing. But can we do it and be clothed so decently as to make ourselves self-respecting? It is doubtful if we can be properly fed on less than $200 a year. From what quarter is retrenchment to come? How many families are there in the country who, striving by all means in their power, cannot earn $500 a year?

The persons who will show how such families can live in comfort on their present incomes will be the greatest benefactors of their time. But the question is too closely involved with the social and industrial problems of the day to be easily answered. It was obviously ridiculous to look for a complete solution in such an exhibit as that made in the Workingman's Model Home.

What, then, did the exhibit accomplish? Its chief value was in the stimulation of thought along these lines. If its success can be measured by the interest shown in it by the public its projectors may well be satisfied. That interest seemed to indicate increasing thought among the people upon the subject of the importance of household economics. From the time of its opening in June, when many of the officials of the World's Fair, leaving more ambitious entertainments, attended the informal afternoon tea given in honor of the completion of the house, to the last night in October, when crowds thronged the house until after the hour for closing, not a day passed when there could not be found among the guests those who came seeking information or help. Among those who came were philanthropists of all shades of opinion looking for practical ideas which they might carry home to their work. There were builders and men specially interested in giving good homes to the laboring classes, who studied the plan of the house and its arrangements. There were students of economics or of domestic science who were interested in the food experiment, and young people going to housekeeping who wanted to copy the lists of furnish-

ings. Last but not the least appreciative were our foreign visitors. Many of these, staying perhaps for a few weeks and visiting few private houses, found this their only opportunity of studying the interior of the home of an American workingman.

The exhibit was indebted to the press of the country for most kindly notices and criticism, and many people who would otherwise have been ignorant of its existence were brought to the model home through this means.

To Prof. Lucy M. Salmon, Hon. John Boyd Thacher and the Board of General Managers of New York State is due the credit of originating the plan and furnishing the means for carrying it out. The work of installing the exhibit at Jackson Park was made easy, and its successful working from day to day insured, through the courtesy and help of the officials of the New York State Building and exhibits, as well as through the many kindnesses of those in authority in the various departments of the exposition.

# REPORT ON THE CHARITIES AND CORRECTIONS EXHIBIT.

EXHIBIT CLASSED IN LIBERAL ARTS DEPARTMENT, BUT INSTALLED IN THE ANTHROPOLOGICAL BUILDING.

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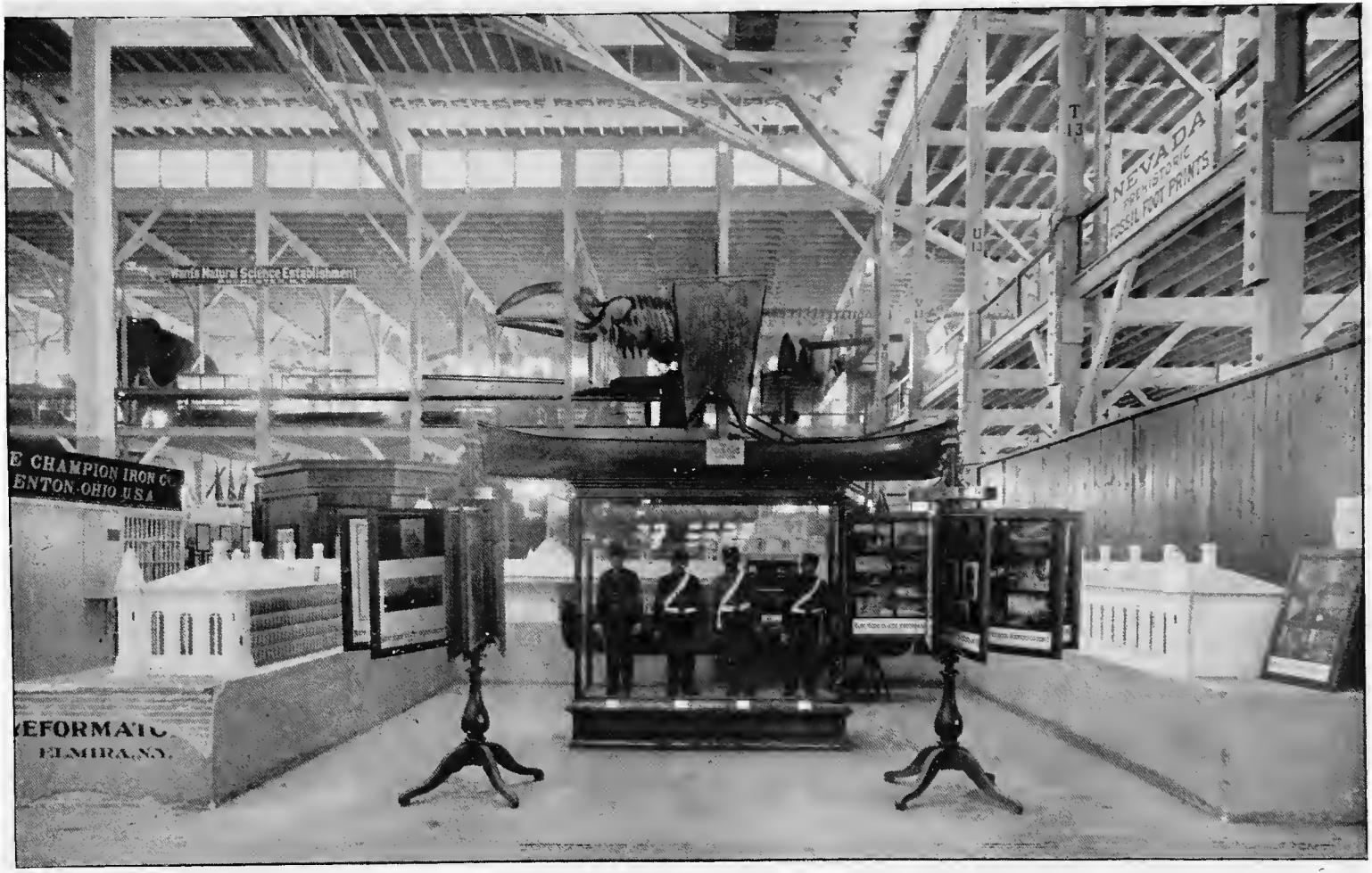
A special effort was made by the exposition authorities to secure from all the States exhibits of the methods employed in their charitable, penal, correctional and reformatory institutions, and a special bureau was formed for that purpose in the liberal arts department. New York's board heartily supported the idea and obtained the co-operation of the State Board of Charities. The latter, under the personal supervision of their secretary, Dr. Charles S. Hoyt, prepared a systematic statement of the laws and conditions governing the work in New York, and tabulated charts of results obtained and developments noted, supplemented by models of the best institutions in the State. The Board of General Managers on their part defrayed all expenses connected with the exhibit. As a tangible and graphic representation of the results of many years of liberal expenditure of public money and of the labors of earnest, able and devoted men and women, it possessed a special interest for our own citizens and gave to visitors from other States and countries an impressive conception of the charitable munificence of New York. It is much to be regretted that the installation of the exhibit from New York was so poorly arranged by the exposition director in charge. Scattered about the Anthropological Building in several different places, in accordance with the exposition idea of a comparative exhibit by States and countries of similar subjects, the display lost a great part of its impressiveness. The paucity of material rendered the "comparative" display in this department a total failure from a scientific standpoint, and the State displays suffered correspondingly in effect because of this fractional arrangement. Much of the confusion was probably due to the indifferent attitude of the exposition officials towards the liberal arts department in the construction period of the fair, and the very late date and consequent hurry in which the Anthropological Building was completed and the exhibits installed.

Among the most noteworthy exhibits from New York in this department were the Rochester Industrial School, containing a full representation of the studies pursued and work done in the institution; the model of the Elmira Reformatory; model of the Utica Insane Asylum; model of the Letchworth Poorhouse, and splendid series of forty-two statistical charts tabulating volumes of information.

The Letchworth Poorhouse especially attracted wide attention. It was designed by the Hon. Wm. P. Letchworth, of Buffalo, who has been for many years a member of the State Board of Charities, and has made poorhouse architecture a study for twenty years. The objects attained in the model are perfect sanitation, convenience and economy




ELMIRA REFORMATORY EXHIBIT

in administration, protection against fire, and a proper classification of the inmates according to their peculiar physical and mental condition, and a complete separation of the sexes. The model on exhibition provided for the accommodation of eighty persons. It is a matter of congratulation that the State was enabled to show a building which virtually represented the experience of the world, and will prove a model for similar institutions in this and other countries.

The following extract from the current annual report of the State Board of Charities will summarize the scope and character of the exhibit:

NEW YORK STATE CHARITABLE EXHIBIT AT THE WORLD'S COLUMBIAN EXPOSITION.

"At the request of the Managers of the Exhibit of the State of New York at the World's Columbian Exposition, held in Chicago in 1893, this board prepared exhibits of the penal, charitable, eleemosynary, correctional and reformatory work of the State, which were forwarded to Chicago early in the year, and assigned space in connection with similar exhibits from other States and countries at the exposition. These exhibits, in accordance with instructions issued by the bureau of charities and correction, approved by the director general of the exposition, then in course of preparation and referred to in the last annual report of the board, were as follows:

"1. A map of the State, designating in block characters the location of all its penal, charitable, eleemosynary, correctional and reformatory institutions.

"2. A directory of the penal, charitable, eleemosynary, correctional and reformatory institutions of this State, showing the object and the purposes of such institutions and their classification by counties.

"3. A set of statistical charts, forty-two in number, relating to crime, pauperism, insanity, immigration, etc., with the annual expenditures therefor, and the value of the property of all kinds in the State, held for penal, charitable, correctional and reformatory purposes, October 1, 1892.

"4. A complete set of the annual and special reports of this board, with copies of circulars, blanks, forms, tables, etc., issued from time to time in the prosecution of its work.

"5. Photographic books or albums of various charitable, correctional and reformatory institutions of the State, with the history, objects and purposes, government and management, receipts and expenditures, and the number of beneficiaries of such institutions, prepared, at the request of the board, by their respective managers.

"6. A model of an approved plan for poorhouses, with special reference to separation of the sexes and classification of inmates, heating, lighting, ventilation and drainage, projected and designed by Commissioner Letchworth and constructed under his supervision and direction.

"In addition to these exhibits by this board, other exhibits were prepared by various charitable, correctional and reformatory institutions of the State and sent direct to the exposition, among which were the following: A model of the State Reformatory at Elmira; a model of a

detached hospital building of the Utica State Hospital; a model of the hospital building of the State Custodial Asylum for Feeble-minded Young Women at Newark, with numerous photographic views of the institution; a large collection of technological work, by the State Industrial School at Rochester; and photographic views of the buildings, plans, etc., of the Buffalo State Hospital at Buffalo, and the St. Lawrence State Hospital at Ogdensburg. The institutions for feeble-minded children, for the blind and the deaf, made their exhibits through their respective national associations for these classes; and, besides those above enumerated, numerous other charitable, correctional and reformatory institutions, societies and associations of the State prepared and forwarded exhibits, through various channels, and were given space at the exposition under the classification to which they respectively belonged.

"It will thus be seen that this State contributed largely to the penal, charitable, correctional and reformatory exhibit at the exposition, and it is believed that its display in this direction, both in the extent and variety of its subjects and the comprehensive and artistic manner in which they were presented, compared favorably with such exhibits by other States and countries, reflecting credit alike upon the State and its institutions. In an address upon the grounds of the exposition upon the occasion of 'New York Day,' his excellency, Governor Flower, referring to the various classes of exhibits by this State, spoke of its charitable exhibit as follows:

"'The great work which New York State and its civil subdivisions do for the relief of pauperism, for the care of the insane and the education of the defective classes, has been demonstrated at this exhibition as it has never been before. The whole range of activity of the charitable, correctional and reformatory institutions of the State has been shown in a way which makes the subject clearer than volumes of reports would do. It is the boast of our christian civilization that it cares for those whom pagan civilization neglected. The private and public beneficence of New York transcends all limitations of sect or creed, and its graphic delineation here may well challenge the attention of the world.'

"These and other exhibits, the property of the State, have been returned to Albany, and are waiting legislative action for their proper care and proposed permanent exposition."

# CATALOGUE OF NEW YORK EXHIBITS IN DEPARTMENT L, LIBERAL ARTS.

## GROUP 147.

(The exhibits in this group were installed in the Anthropological Building.)

Brooklyn Orphan Asylum Society.— Photographs — buildings, interiors, classes at work, etc.; specimen work in wood carving, chair bottoming, shoe strings, netting, fancy needle and crochet work.

Charts.— A series of thirty-three printed and graphic charts relating to penal, charitable, eleemosynary, correctional and reformatory institutions; their location, number of inmates, operating expenses, average number of inmates by decades, nationality of inmates, expenditures, increase of immigration, value of property, cost to State and other interesting and pertinent statistics.

Elmira Reformatory.—Building; plaster model, very large, open at one side to show distribution and arrangement of cells; canoes, two specimens, elaborately finished, made in the reformatory; figures, four wax, showing four styles of uniforms; photographs — scenes in wing frames, showing exteriors and interiors of buildings, class rooms, gymnasium, workshops, drill, etc.; photographic specimens of work done and materials made in the institution.

Fitch Créche, Buffalo — under the auspices of the "Charity Organization Society" for the care of children during the working hours of mothers.— Charts —organization, statistical; diagram of créche and training school; photographs —building, interiors, groups.

Hebrew Benevolent and Orphan Asylum, New York.— Photographs — buildings, interiors, groups, classes at work, etc.; publications — reports and papers of the institution; specimen work of students.

Hebrew Sheltering Guardian Society, New York. — Photographs of Orphan Asylum, exteriors and interiors.

Hebrew Technical Institute, New York. — Photographs — buildings, class rooms, work rooms and apparatus; specimen work — wood carving, sixty pieces; metal work, seventy-eight pieces; practical electricity, etc.; mechanical drawings, forty pieces; free hand, thirty-two pieces.

Home for Aged and Infirm, Yonkers — under auspices of Independent Order of Benai Berith.— Photographs and historical sketch.

Independent Order of Treue Schwestern, New York.— Historical and statistical sketch.

"Kemmler" chair; first chair and apparatus used in the world to inflict the death penalty by electricity; first used at Auburn prison August 6, 1890, for the execution of Kemmler.

Letchworth Poorhouse.— Model almshouse with working plans.

List of charitable, benevolent and cooperative associations and societies in the State.

Louis' Down Town Sabbath and Daily School.— Chart — statistical and explanatory; photographs — class rooms, classes, exercises, specimen work.

Map showing location of every penal, charitable, eleemosynary, correctional and reformatory institution in the State.

New York Protestant Episcopal City Mission Society.— Report 1891–1892; photographs — album of various hospitals, prisons and correctional institutions where its work is carried on.

New York Opthalmic Hospital.— Photographs; reports.

New York Sisterhood of Personal Service, Hebrew Women. — Charts, statistical.

New York State Home for Aged and Infirm Hebrews.— Historical sketch; photographs.

Photographs, miscellaneous:

American Female Guardian Society's Home for the Friendless.

Brooklyn Industrial School and Home for Destitute Children.

Buffalo Hospital of the Sisters of Charity.

Catholic Male Orphan Asylum, Troy.— Album.

Hebrew Orphan Asylum, New York.— Kindergarten.

House of Good Shepherd, with sketch, Troy.

House of Good Shepherd for Destitute Children, Utica.

Hudson Orphan and Relief Association. — Album.

New York Institute for Instruction of Deaf and Dumb.— Album.

Rockaway Beach Sanitarium.

St. Coleman's Orphan Asylum, Watervliet.— Album.

St. John's Orphan Asylum for Destitute Females, with sketch, Utica.

St. Vincent's Orphan Asylum, Albany. — Album.

Troy Hospital of Sisters of Charity.

Publications, miscellaneous:

Association for Befriending Children and Young Girls; House of Holy Family, Second avenue, New York, and House of Nazareth, White Plains.— History.

Demilt Dispensary.— Reports, two volumes, 1851–1892.

Margaret Strachan Home for Fallen Women, New York.— Report.

New York County Visiting Committee of State Charities Association for Bellevue and other Hospitals.— Reports, 1872–1883.

New York Training School for Nurses, Bellevue.— Report.

Sanitarium for Hebrew Children of the City of New York.— Report.

Saratoga Home for Children.— History.

State Board of Charities.— Reports, nineteen volumes, 1867–1890; specimen blanks and papers.

State Charities Aid Association, New York.— Papers and reports, seven volumes, 1872–1892; Report to State Board, five volumes, 1872–1892.

State Charities "Record," 1889–1892.

St. John's Guild, New York (for the relief of sick children, without regard to creed, color or nationality).— Charts, statistical and explanatory; combination iron bed and suspended crib; oil painting of floating hospital; pen sketch of "sea side" hospital; photogaphs of hospitals, grounds, interiors, etc.

St. Mary's Orphan Home, Binghamton. — Album of photographs, specimen work of pupils.

St. Mary's Orphan Asylum, Dunkirk.— Photographs; specimen class work; specimen sewing.

St. Vincent's Female Orphan Asylum, Buffalo.— Photographs; historical sketch; specimen needlework.

Society for the Reformation of Juvenile Delinquents in the City of New York; New York House of Refuge.— Specimen kindergarten work; specimen drawings in all grades; specimen sewing; plain and fancy needlework.

Soldiers and Sailors' Home, Bath.— Sketch of institution, topographical map of grounds; photographs.

State Hospital for Insane, Binghamton. — Specimen articles made by inmates.

State Hospital for Insane, Buffalo.— Photographs — buildings, exteriors, interiors, etc.; training school statistics,

State Hospital for Insane, Utica.— Model of hospital (five and one-fourth by six and one-fourth feet); reports, five volumes, 1843–1893; Journal of Insanity, printed and bound in hospital; photographs — buildings, exteriors and interiors, grounds, etc.; specimen articles made by inmates.

State Hospital for Insane, Willard.— Pen drawings of hospital buildings and surroundings.

State Industrial School, Rochester.— Charts, statistical and explanatory; exhibit booth, designed and made by the students, photographs — buildings, grounds, etc., plaster cast of horse and pedestal by boy sixteen years old; rules of institution; specimen work in drawing, fullhand, mechanical and architectural, clay modeling, wood carving, ironwork and blacksmithing, painting, needlework, tailoring.

FIRST ELECTROCUTION CHAIR

# REPORT ON THE BOARD OF HEALTH EXHIBIT.

INSTALLED IN THE ANTHROPOLOGICAL BUILDING.

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The exhibit of the New York State Board of Health was undertaken by that office at the eleventh hour upon the earnest solicitations of Chief Executive Officer McNaughton. For the limited time at their disposal the display was of the highest order and presented in conclusive form New York's much heralded system of supervising and enforcing health laws. No attempt was made to show in full the developments of the powers and jurisdiction of the board, but a few typical systems of water supply, sewerage and general sanitation were fully exemplified, and these exhibits supplemented by statistics, reports and treatises on various phases of health topics. Among the most prominent exhibits were a map showing the eight sanitary districts of New York, viz.: The Maritime, Hudson Valley, Mohawk Valley, Adirondack and Northern, East Central, West Central, Lake Ontario and Western, and Southern Tier, together with charts showing the relative area, density of population, and average death rate of each district, a statistical chart giving summaries of the monthly bulletins of mortality from 1887 to 1892, and a series of yearly bulletins of mortality.

The Croton river watershed and aqueduct was taken as a type of its class as it supplies the largest city of the country. A large map was constructed containing the course of the New Croton aqueduct, present aqueduct, Bronx river pipe line and the watersheds of the Croton, Bronx and Byram rivers. Plans and sketches of the villages in the Croton watershed occupied three small charts, and arranged in one large frame were sixty-six views of various parts of the Croton watershed. A graphic analytical chart of Croton water completed this exhibit.

Several villages in the State were taken to illustrate the best methods of drainage and sewerage. An elaborate plan of the sewerage system of White Plains was exhibited to show the "chemical process" used there with marked success, while a plan of the sewerage works of Albion, with a sub-plan showing filter field and outlet sewers, was exhibited to show the "filtration bed" process. Plans of the sewer systems of Medina, Suspension Bridge, Gouverneur and Walton illustrated the most improved methods of direct gravity drainage into large bodies of water. A complete set of the reports of the State Board of Health with several scientific treatises on germane subjects completed this very comprehensive and interesting exhibit.

The New York city board of health also made a valuable exhibit which may be briefly summarized as follows:

1. One large album containing about 500 of the principal blanks used in the department, so arranged as to illustrate the usual routine

work of the department from the time of receiving a complaint from any citizen until the final disposition of the same, and illustrating the work performed by the several divisions of the department and of the officers and employees thereof.

2. A collection of the more important circulars and pamphlets issued by the board of health for public distribution.

3. Thirty-nine large photographic views, framed, illustrating the machinery of the department in transporting and caring for persons sick with contagious disease, as well as the methods and machinery used in fumigating, disinfecting or destroying infected goods.

# REPORT ON THE NEW YORK EDUCATIONAL EXHIBIT.

By HOWARD J. ROGERS, Albany, Assistant Director.

The New York educational exhibit held the position of honor in the liberal arts department. One-seventh of the space devoted to education was granted the "Empire State;" and the central bridge connecting the south aisle and leading directly out from the office of the liberal arts department was assigned to her use. This space contained 10,864 square feet. Separated from this space by the liberal arts offices were 2,500 feet, granted the technical schools, and in the southeast corner of the building were 400 feet allotted to the trade schools. This made a total assignment to New York of 13,764 feet, not including the space granted the art schools and business schools in the west gallery.

The installation of the exhibit of the State was in keeping with this generous recognition of her prominence in educational matters. The walls and partitions were made of quartered oak and the picture-hanging surface covered with baize of purple, the State color. Oak tables, desks, cabinets, showcases, bookcases and chairs were furnished in quantity to fully equip the space. The alcoves were large and the arrangement was designed to give an open, roomy effect and to avoid the stall-like appearance too prevalent throughout the department. Signs and banners of purple and gold marked every division of space. The effect of the complete installation was striking, artistic and harmonious. Abundant testimony was given throughout the fair, not only by the general public, but by experts and critics specially appointed, that in artistic arrangement New York's exhibit was easily foremost in the liberal arts department.

## Educational Bureau.

The preparation and supervision of the educational exhibit was delegated by the Board of General Managers to a bureau specially appointed as a sub-department of the commission. Under dates of August 25 and September 3, 1892, Hon. John Boyd Thacher wrote Melvil Dewey, secretary of the University of the State of New York, expressing his anxiety over "our failure to make a proper educational exhibit," and urging him to take charge of the proposed bureau. Mr. Thacher further urged "that it is the one opportunity likely to occur in our lifetime of showing to the world the condition and progress of educational matters in the State of New York." Mr. Thacher promised the immediate appropriation by the Board of General Managers of $5,000 for preliminary expenses, and further promised the financial support of the board for any adequate plan adopted. The result of this

correspondence was the calling of a special meeting of the Board of Regents on September 29, 1892. Mr. Thacher was invited to come before the board and present the matter fully for their consideration. The following extract is from the official minutes of the meeting:

"Mr. Thacher made a statement of the plans for the educational exhibit at the World's Fair, and said that the Board of General Managers for the State, after careful consideration, felt that it was essential to the best success of the State's educational exhibit that the Regents should allow the secretary of the University to undertake its organization and immediate direction. He said the State Board had already set apart $5,000 for expenses up to January 1, 1893, and if more was necessary it would be provided, as they would prefer to stop some of their judicial district work, if necessary, rather than cripple the educational exhibit, which ought to be the special pride of the State. Many questions were asked and answered, and after Mr. Thacher's withdrawal the board discussed the question at length.

"On motion of Regent Harris, it was finally unanimously

"Voted, That the secretary be authorized to accept the appointment of director of the bureau of the educational exhibit of the State of New York at the World's Columbian Exposition, and to devote so much of his time to the new duties as may be consistent with his necessary supervision of the regular work of the university; provided, that the State Board of Managers meet all necessary expenses of the bureau, including needed assistance."

This action was ratified by the Board of General Managers, and on October twelfth Mr. Howard J. Rogers, of the Albany Academy, was selected as Mr. Dewey's executive officer, with the title of assistant director. Prof. Lucy M. Salmon, of Vassar College, was made director for the Women's Board. The following advisory board was appointed to assist in preparing plans for an exhibit: Pres. Seth Low, Columbia College, New York; Pres. David J. Hill, University of Rochester, Rochester; Hon. James F. Crooker, State Superintendent of Public Instruction, Albany; Pres. James M. Taylor, Vassar College, Poughkeepsie; Pres. J. G. Schurman, Cornell University, Ithaca; Prof. Lucy M. Salmon, Vassar College, Poughkeepsie; Rt. Rev. Henry Gabriels, bishop of Ogdensburg, Ogdensburg; Frederick B. Pratt, secretary Pratt Institute, Brooklyn; Hon. A. S. Draper, ex-Superintendent of Public Instruction, Albany; Miss Ella Weed, Barnard College, New York; Felix Adler, Society for Ethical Culture, New York; Pres. William J. Milne, State Normal College, Albany; William H. Maxwell, superintendent of schools, Brooklyn; Prof. P. C. Ricketts, director Rensselaer Polytechnic Institute, Troy.

As indicated by the name, the powers of the above board were purely advisory, and after two meetings, in which a general policy was outlined, the further development of the exhibit and the execution of all details were left in the hands of Director Dewey and his assistant, Mr. Rogers.

### PLAN FOR SECURING EXHIBITS.

The short time intervening between the opening of the fair and the establishing of the educational bureau required the most active work on

NEW YORK AISLE, Looking North

the part of its officers, and a larger expenditure for expert labor, traveling expenses, etc., than would have been the case with more time. The uncertainty, also, of the educational interests of the country receiving proper recognition from the Chicago authorities, and the long delay, till January, 1893, in assigning space after such recognition was made, greatly hampered their efforts.

That the bureau was able, under these conditions, to prepare so complete an exhibit was due largely to the loyalty and zeal with which the school superintendents and principals responded to their appeals. The educational bureau was charged with securing a proper representation of the universities, colleges, professional and technical schools, academies, high schools and elementary schools. Its first circular, issued October 26, 1892, urged the institutions to make an exhibit: First, as a matter of National, State and local pride; second, for the value to the institution itself of preparing the exhibit; third, for the opportunity of winning the widest possible public recognition of any special merits. A series of suggestions followed as to what might be exhibited.

The chief objections on the part of the institutions to preparing an exhibit were reduced to three: *First*, lack of time; *second*, lack of money, it being generally recognized that to push an exhibit through rapidly would require nearly double the outlay necessary if the preparations could be made slowly; *third*, a doubt as to the advisability of preparing an exhibit under the circumstances for so short a period. To remove these objections, the bureau was authorized by the Board of General Managers to announce that certain expenses connected with the exhibit and all expenses after the actual preparation of material would be borne by the bureau. This decision met the first two objections, and the third was removed by the following plan, formulated by the bureau and ratified by the Board of General Managers in November, 1892. It was first published in the general circular, No. 5, under date of November 29, 1892:

"Unless otherwise specified, all exhibits sent to the bureau will be treated as contributed to the State's educational exhibit, which, after the Columbian Exposition, will be kept in the Capitol at Albany as the nucleus of a *permanent educational museum*. Exhibitors may, therefore, feel that they are preparing exhibits not simply for six months in the temporary buildings at Chicago, but also for permanent display in the finest fire-proof building on the continent, and in a location which insures constant use."

In return for these gifts the Board of General Managers agreed to relieve schools entirely of charges for (1) printed forms, labels, shipping envelopes, tags, etc.; (2) special facilities for displaying work of unusual excellence; (3) composition of handbooks; (4) wing frames, cabinets, showcases, tables and shelves; (5) transportation; (6) installation; (7) care and supervision during the exposition. This effort to build up a pedagogic department in the State Museum at Albany was heartily approved by the schools and colleges, and the result justified the broad views of the commission, for save in the case of one institution every exhibit was given to the bureau on these terms.

### METHOD OF ARRANGEMENT.

Positive regulations were issued by the liberal arts department at Chicago, which stated that the public school exhibits must be by grades, and that the State was the smallest unit that would be recognized. A stranger desiring to study primary school work and methods could thus find it all grouped in one place instead of having to search for it in as many different places as made exhibits. This arrangement was by far the most logical and scientific, and was only objected to by cities which desired to have an alcove by themselves.

It was decided, after much discussion with the advisory board, not to attempt to secure a modification of the rule, but to arrange the exhibit from a State standpoint. The graded plan worked out satisfactorily, and, instead of eliminating the factor of local pride in preparing an exhibit, proved rather to stimulate it, for each school system was spurred on to make a finer display in each grade and produced a better balanced exhibit than is likely to be seen where all grades are grouped together and the deficiencies of one allowed to go unnoticed because of the excellencies of another. Within each department, however, the exhibit of a city or village was shown as a unit, so that while the State did not have what is technically called a "collective" exhibit, it did present a comparative display of "collective" exhibits from cities and institutions. Means were thus furnished of not only comparing New York State with other States, but of comparing one section of New York with another.

### PLAN OF EXHIBIT.

The exhibit was divided into eleven general departments: University of the State of New York, universities and colleges, university extension, technical schools, trade schools, academies, high schools, normal schools, elementary schools, kindergarten and private schools. Each of these departments occupied one large alcove of about 600 square feet, except the elementary schools, which had two, the colleges and universities which occupied about 3,500 feet along the east and west university aisle, and the Pratt Institute and Rensselaer Polytechnic Institute, which between them occupied 2,500 square feet in the southwest corner of the gallery. The two latter institutions and the New York Trade School were unfortunately separated from the main exhibit by a departmental rule which aimed to group together schools of a class.

The New York art schools occupied, in addition, about 1,000 feet in the west gallery, and the business schools about 500 feet in the collective business college exhibit, midway up the same side.

The accompanying plan was adopted for the division of space.

This effective arrangement typified the peculiar organization in New York. In the same legislative act of May 1, 1784, the University of the State of New York was created and Columbia College chartered on the basis of old King's College. These two oldest institutions were at the left and right of the long aisle. Beginning with the State University department, which occupied by virtue of its organization the

position at the intersection of the University and New York aisles, the line runs on the west through the universities of the State, colleges for men and women, professional and technical schools, law, medicine, theology, etc., endowed academies, high schools, academic departments of union schools and private schools for boys and girls, ending at the south entrance with university extension. On the east the line runs from the State University through Columbia, cotemporary in age, Teachers College, which is so closely affiliated with Columbia and is also the connecting link between the normal schools and the higher institutions, then to normal schools, grammar and primary schools under the jurisdiction of the Department of Public Instruction, to the kindergarten, which provides for the educational needs of those younger than the ordinary school age, as university extension, across the aisle at the end of the other series, provides for those older.

The divisions were not arbitrarily made and all exhibits of the same grade crowded into the space assigned it, but the partitions were rather placed to accommodate the amount of material exhibited in a department. To secure uniformity, the partitions on the west of the long aisle were made to correspond closely with those on the east.

The boundary partitions were ten feet high. A heavy oak floor piece, eight inches high, was the foundation. A pine partition, covered with rich purple baize, fitted into this and carried the height to eight feet. Surmounting this to the height of two feet was a handsome frieze and wainscoting of quartered oak. The cross partitions, or thirteen and one-half foot screens, were eight feet high and similarly made with the exception of the superior frieze. Along the ten-foot aisle on either side was a row of fifty oak showcases three feet high. These, while affording valuable exhibit space, gave the appearance of greater breadth to the aisle and a more open effect to the whole exhibit. This was further heightened by the use of wing frames as a substitute for wall space. Twenty-two of handsome design were built of oak, and as each standard carried fifty double frames, with a show surface on each frame of twenty-two inches by twenty-eight inches, a total exhibit space of 9,394 square feet was obtained, or enough to display 13,200 eight by ten-inch photographs. Oak cabinets, bookcases, tables and chairs in quantity completed the furnishing. So expensive an installation would not have been made, nor in fact justified, for a mere six months' show; but as the complete outfit was to become the ultimate property of the State and be located in the Capitol, it was considered a wise economy to have it harmonize with the oak furniture of the Capitol.

As a rule the exhibits presented by the schools and colleges followed the line of suggestions sent out by the bureau, and consisted mainly of photographs of school grounds, buildings, both exterior and interior views, groups and classes at work, specimen written work in all subjects, scientific collections, statistical charts, administrative forms and blanks, work in manual training departments, handbooks, catalogues, circulars, etc. The above exhibits differed from those of other States and countries only in their quantity and superior quality, and the scope of this report does not warrant their detailed enumeration. A complete catalogue of the New York educational exhibit is appended.

A resumé of the exhibit by alcoves is given here, followed by a description of the many special features and new ideas in exhibits which attracted wide attention and rendered New York's display the most noteworthy in the department.

### EXHIBITS BY INSTITUTIONS.

The exhibit of the University of the State of New York was by far the most comprehensive and exact of all the State educational systems shown. Each of its six departments presented a systematic display of its organization, government, methods and results.

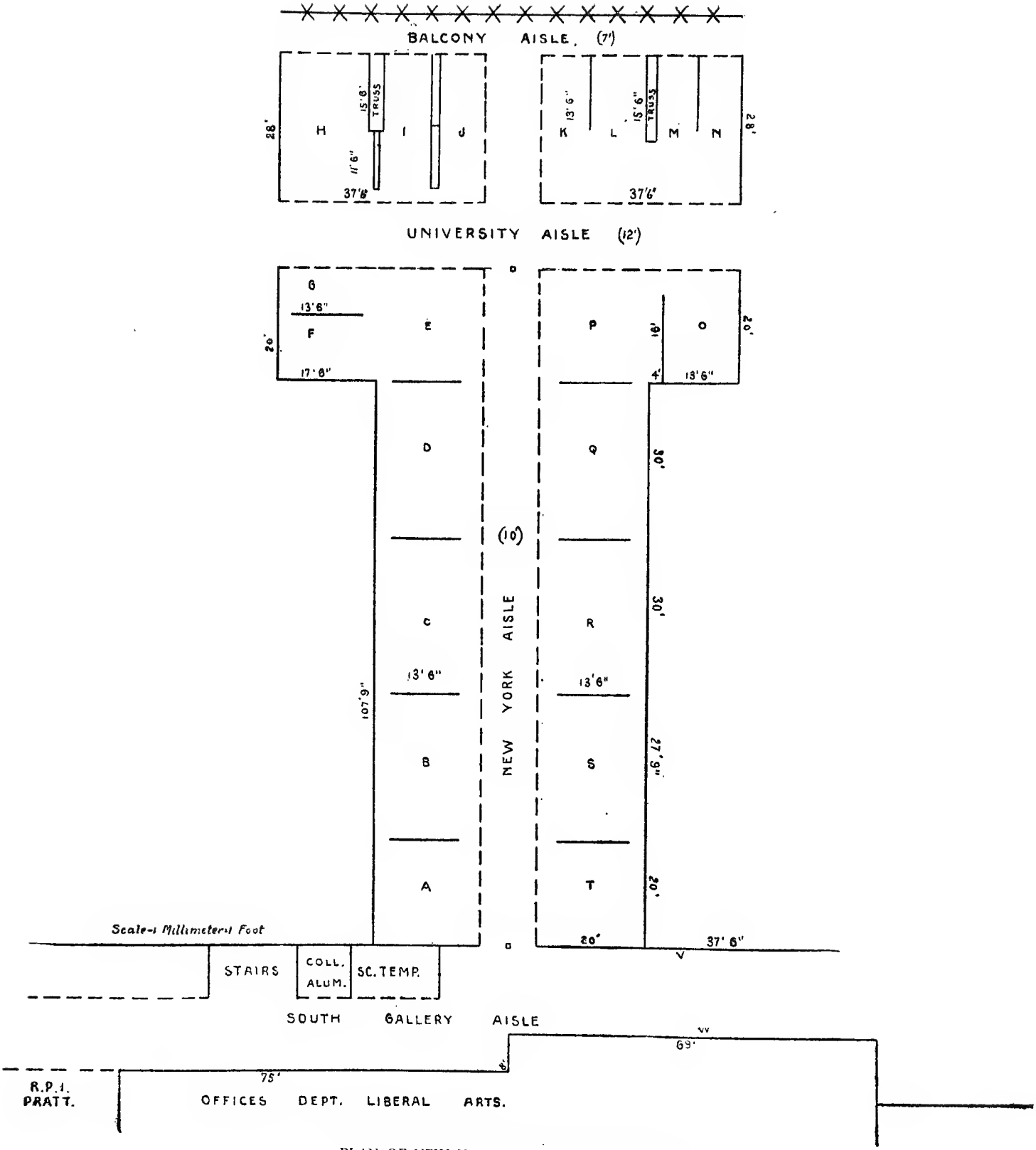
The administrative department occupied alcove "E" in the central portion of the space, and was used also for the executive office of the exhibit. The workings of its system by which the University of the State may incorporate and supervise universities, colleges, professional and technical schools, academies, high schools, academic departments, libraries, museums and extension centers, maintain and protect the standard of academic honors and degrees, prevent the use of the name "university" or "college" by unworthy institutions, and combine the great advantages of central organization and supervision with entire freedom for individual and local initiative, were fully shown.

A photographic exhibit of over 2,000 views was collected from its 484 institutions, and by a series of historical, statistical and descriptive printed and graphic charts and records, the entire educational work of the university was illustrated. Busts and portraits by famous artists of eminent regents, distinguished in State and National affairs, adorned the space. One of the most striking features was the improvements in model desks, tables and office equipments. These labor-saving methods, appliances and administrative forms are designed to secure the largest practical return for a given expenditure of time, by the use of the most efficient tools, as similar results are attained in manufacturing and business houses by utilizing the latest improvements in machinery and methods. Special prominence was also made of the correctness and clearness of the records of all financial transactions and of the efficient safeguards against accidental or intentional irregularities.

The minimum and standard academic apparatus in the same alcove, and the series of handbooks, will be spoken of under the head of special features.

The exhibit of publications, records, etc., was particularly valuable and complete. A series of annual reports since 1784, based on sworn returns from institutions of the university, were shown, as well as the many forms, blanks and methods for collecting accurate information and tabulating the same. There were also thirty-one volumes illustrating the educational value of the annual conferences of the university convocation from 1863 to 1893, historical and statistical record from 1784 to 1884, and many other important publications. The system of frequent printed bulletins, issued in advance of regular reports and giving early information of educational meetings, legislation, etc., was a distinctive feature.

The examination department in alcove "I" presented a carefully arranged exhibit of its elaborate system of academic and higher exam-




PLAN OF NEW YORK EDUCATIONAL EXHIBIT

inations in college and university studies, and also of its methods of examinations for law and medical students, which has resulted in raising the standard of admission to these schools and in protecting the public from incompetence and fraud. Over 20,000 answer papers in 200 bound volumes illustrated the scope and variety of the work. Graphic and printed charts marked the development and progress of the department. The excellent system of credentials, with its series of fifty-one diplomas, certificates and pass cards artistically engraved and lettered, attracted wide attention.

The State Library in alcove "J" made an extensive exhibit of blanks and forms illustrating the most efficient and economic methods of library administration; charts, tables, summaries and indexes of the decimal classification used in the library and already adopted by many libraries at home and abroad, and its inexpensive methods of distributing desirable publications to the libraries of New York through the duplicate department, which acts as a clearing house for the libraries of the State. Its bulletins, designed to serve as a guide to smaller libraries in selecting, classifying and cataloguing, were shown, and its annual summaries of comparative legislation, which places before public officers a clear but very compact statement of every law on every subject enacted in any State of the Union during the last session of its Legislature. Specimen traveling libraries on several topics were exhibited and the system explained whereby any community may borrow from the State for six months a carefully selected library on any topic. A splendid series of fifty bromide enlargements of photographs of the library and its equipment gave an admirable conception of its size and work.

The New York State Library School exhibited its methods of instruction and administration, a series of bound volumes illustrating the quantity and quality of the printed work of the alumni and non-graduates of the school since its opening in 1887, and an extensive exhibit of manuscript work of its students, including bibliographies, theses in library economy, annotated and illustrated reading lists, note books, charts, tables, summaries, indexes, etc. One volume of comparative cataloguing rules was specially worthy of note.

The State Museum exhibited a file of its valuable scientific publications, including annual reports since 1847, a series of interesting bulletins on building stones, mineral resources, salt industries and similar scientific treatises of practical economic value, and twenty-nine volumes on the zoology, botany and paleontology of the State.

For convenience of comparative study, the extension department of the university was placed in alcove "A" with the other extension systems in a collective exhibit. Charts, forms, syllabuses and bulletins sufficient to fully illustrate its workings were displayed. Six traveling libraries, arranged in their specially designed shipping cases, attracted much attention and favorable comment.

Columbia College, as befitted her age and rank, had by far the largest space accorded the universities and colleges, occupying 1,000 square feet in alcoves "K–N." It was attractively fitted out, and the chief exhibit features were a series of thirty very large photographs

of buildings and interiors; set of statistical charts; plans of old and new site; 190 volumes of works of faculty and alumni; curriculum of King's College and of Columbia in 1784; historical exhibit of old paintings; copper crown given by George III to King's College and a valuable collection of pamphlets and handbooks for free distribution.

The Teachers College (alcove "O"), which is in a certain sense the pedagogic department of Columbia, made exhibits in two departments only — the Horace Mann School of English, and manual training.

It was New York's good fortune to throw a volume of light on the much discussed question of manual training. The graded exhibits from New York city public schools, Workingman's School, New York, Albany High School and Newburgh Free Academy were all in evidence. The system presented by Prof. Chas. A. Bennett of the Teachers College, however, was without doubt the most scientific course of manual training adaptable to American schools shown at the exposition. It won the highest commendation from American and foreign critics. The exhibit of wood working was a carefully prepared series of models to illustrate Prof. Bennett's "group system." There are six courses, each consisting of a series of groups designed to teach certain principles and their applications. Each group contains two or more required pieces, or models, which every pupil in the class must make. It also contains supplementary pieces which are made by the rapid and more skillful pupils. These courses are designed for boys and girls between the ages of eight or nine and fourteen or fifteen, with a supplementary course of one year in wood turning for boys only. A small cover adjustable to any ordinary school desk and containing an outfit of bracket saw, knife, pencil, rule and triangles sufficient for the first two years' work was a special feature of the course, as it permits its introduction in any school room and saves the expense of fitting up a work room for primary pupils.

Accompanying this course was one in clay modeling designed by Prof. Herrick. It comprises a series of clay sketches. Each piece, except in the case of the last year, is done in one lesson. The beginning of this course is intended for children eight or nine years old, or for those who have had preliminary training in form. The work is planned for six consecutive years, and a part of the time is spent in drawing and color work. The object is to lead children to observe closely and to express readily ideas of natural forms, and of the characteristics of the great styles of architecture and ornament. The idea is to have this work practicable in all public schools. The only expense for the first five years is the clay and the school slates upon which the children work. The sketches of architectural forms, the ornament and the vases are made from large outline drawings; the natural forms are modeled from nature and the work of the sixth year from casts. Literary work on architecture and ornament is done in connection with the modeling.

Cornell University abandoned its idea of making a detailed exhibit on account of the inability of securing space in time from the Chicago authorities. At the request of the bureau, however, Cornell prepared a series of 145 eleven by fourteen-inch photographs, and thirty-five

statistical charts. These were shown in a wing frame, and with its catalogues and handbooks for free distribution formed a compact and wonderfully comprehensive exhibit.

The University of the City of New York occupied alcove "H." Its exhibit was one of the most carefully prepared on the university aisle. Photographs, charts, plans, publications, curriculums, etc., fully illustrated the work of each department, but it excelled in the presentation of the work of its alumni. Most interesting and valuable were the earliest known sun-picture or daguerreotype of the human face, taken by John W. Draper; early photographic appliances used by him in developing photos; Henry Draper's photograph of the moon, nebulæ of Orion, spectrum analysis, etc.; electrical apparatus devised by S. F. B. Morse and his co-worker, Prof. A. S. Vail, together with the oldest telegram in the world, sent from the university by Morse, January 24, 1838, as dictated by Gen. T. S. Cummings: "Attention, the universe; by nations, right wheel;" words jesting, but certainly prophetic; a law and medical library written by the university staff, past and present, and photos of the late J. W. Root, consulting architect of the Columbian Exposition, and George B. Post, architect of the Manufactures Building, both of whom were graduates of the university. A valuable set of charts from the school of pedagogy on the history of education, evolution of the public school system, and other subjects were noteworthy. The exhibit was in charge of Prof. Edward R. Shaw during July and August, the "educational months" of the fair.

Vassar College occupied 150 square feet in alcove "G." The exhibit was well chosen and compactly displayed. On a wing frame were photographs, courses of study, entrance examinations and administrative forms; on the wall statistical charts, work from the biological and zoological laboratories, and specimen rock cutting as done by Prof. Dwight's petrotome. A photograph of this famous machine was exhibited, as it was deemed impracticable to take the original apart and set it up at Chicago. A series of photographs of scenes and characters from the Greek play "Antigone," as given at Vassar in the spring of 1893, attracted much attention and recalled vividly the success of its scholarly and artistic production. A complete file of student publications was sent on for reference, and catalogues and handbooks in abundance for free distribution.

Colgate and Rochester Universities occupied the larger part of alcove "F," and their exhibits consisted mainly of photographs, courses of study and publications. Hamilton College and the College of the City of New York also had small exhibits in the same space.

In alcove "D," next to the executive department of the University of the State of New York, were situated the exhibits of the endowed academies. Prominent among these were the Albany Academy; Albany Girls' Academy; New York Military Academy; St. John's Military School, Manlius; Riverview Academy, Poughkeepsie; Fort Edward Collegiate Institute; St. Patrick's Academy, Catskill; St. Joseph's Academy, Flushing, and La Salle Institute, Troy. Situated in this alcove also was the exhibit of home-made apparatus, mention of which is made under special features.

Alcove "C" was occupied by the high schools, the chief contributors to which were the high schools of Albany, Buffalo, Binghamton, Poughkeepsie, Rochester and Syracuse. The most noteworthy exhibits were a splendid collection of drawings from the Albany High School, which had been submitted for the Annesley art prize and the City prize, which are given annually; specimens of manual training work illustrating the system pursued in the boys' department of the Albany High School, and also the Sloyd system, practiced in the girls' department of the same school; a graded system of manual training from Newburgh Free Academy; a collection of rock and wood specimens from Broome county, contributed by the students of the Binghamton High School, and a large memorial window etched for the Rochester High School by its class in chemistry, as is the custom of each graduating class.

Alcove "B" was assigned to private schools. No other State has so many or so good private schools as New York, and it was eminently fitting that they should receive recognition from the bureau, although they are not a part of the State school system. Some very fine exhibits were received, the best of which were the photographs, prize drawings, rock and mineral specimens and administrative forms and blanks from the Berkeley School, New York; cabinet of geography and history charts and portfolios from Dr. Sach's School for Girls, New York; sewing from Mrs. Leopold Weil's School, New York, and Christiansen Institute, Brooklyn. A graded course in sewing from the Industrial School of the Church of the Holy Communion, New York, was also highly instructive.

Alcove "A," the last on the right of the New York aisle, contained the collective University Extension exhibit which was prepared by the bureau. It formed a comparative exhibit of the methods, administration, forms, examinations, etc., from the extension department of the University of the State of New York, University of Chicago, University of Edinburgh, People's Palace, London, Chautauqua and Catholic Summer School of America. The exhibit of the University of the State of New York has already been spoken of. The Chautauqua exhibit was also very complete, and thoroughly presented the manner of conducting this organization.

One-half of alcove "P" was occupied by the splendid exhibit of the Workingman's School, which is conducted under the auspices of the Society for Ethical Culture. The aims of this school, as tersely put by its chief promoter, Dr. Felix Adler, are "not merely to teach the three R's, nor to enable pupils to earn a living, nor to endow them with accomplishments, nor to make them merely intellectually efficient, but to build up manhood and womanhood. It is believed if the highest aim is achieved the lesser also will be attained incidentally." The scientific course of study and intelligent work displayed were among the most admired exhibits at the fair. A special feature of the school is its manual training, which is introduced in the lowest grades and developed throughout the course. Its objects are so concisely stated as to bear repetition here: To train eye and hand; to develop the imagination; to give definiteness to the elementary conceptions of geometry; to furnish the pupils with the opportunity of making their

NEW YORK AISLE, Looking South

own physical apparatus; to inculcate the dignity of labor; to foster those moral habits which manual work is specially calculated to produce. The exhibit was arranged by Dr. Max Groszman, superintendent of the school.

In the same alcove was the photographic exhibit of the American Museum of Natural History, the phonograph and the overflow from the normal schools. The latter occupied almost one-half of alcove "Q." Every school in the State was represented except Brockport. The largest and most complete exhibit was made by Oswego. It consisted of theses and discussions written by students on nearly every educational topic, educational works written by the faculty and alumni, statistical charts, work from scientific and practice departments, photographs, circulars, etc. The exhibit attracted much attention for its scientific value. The Cortland Normal School showed a fine collection of drawings, written and laboratory work; the Buffalo Normal School a full line of written work and photos. Other noteworthy exhibits were photographs from Oneonta and Potsdam, and art work from Fredonia. A handbook, entitled "State Training of Teachers," was compiled by a committee of normal school principals and distributed during the fair.

The exhibit of the elementary schools, which occupied alcoves "S," "R" and one-half of "Q," would have been extremely meagre had it not been for the energetic action of New York city, which prepared a fine exhibit on very short notice. They were able to do this through the broad policy of Donald McNaughton, at that time chief executive officer of the State Board of Managers, who granted the necessary funds for its preparation. Two of the alcoves were taken by New York, one for the work of the regular course primary and grammar schools, and the other for the manual training primary and grammar schools. In number the latter comprise about one-third of the New York public schools. Their exhibit was under the supervision of the late Dr. Paul Hoffman, assistant superintendent of New York schools. The manual training course has only been in use among New York schools for four years, and was rapidly growing in popularity and usefulness under the talented and enthusiastic direction of Dr. Hoffman, who has had charge of the movement since its inception. By his course of study and admirably arranged specimens of work illustrating it, he proved to the satisfaction of most critics that he had not only found the proper adjustment and relationship of manual training to other studies, but had also bridged the chasm which has engulfed so many widely-heralded plans between primary and secondary manual training. Progressive school work and New York city in particular, has lost a valuable servant by his untimely death. Dr. Hoffman had full charge of the arrangement of the New York city work, and was in attendance during May, July and August.

Other cities which contributed an amount of work sufficient to give a thorough understanding of their elementary systems were Albany, Buffalo, Plattsburgh, Poughkeepsie, Rochester and Syracuse.

The kindergarten exhibit was prepared under the special supervision of the bureau. The most interesting feature was a series of thirty bromide enlargements of instantaneous photographs of a typical kinder-

garten. The views were carefully arranged to show the life of the children in their "morning talks," gifts, occupations and games through all the grades. A more graphic representation of kindergarten life has never been made, and it was a revelation to many parents of the true spirit which actuates the kindergarten. The school which was taken as a type was Washington Grammar School, No. 26, of Rochester, Col. S. P. Moulthrop, principal. A series of gift work prepared by the Albany public kindergartens and the Teachers College Kindergarten, and a series of twenty cards, illustrating color and science teaching, from the American Kindergarten of Mrs. E. M. Coe, 70 Fifth avenue, New York, were also features of the alcove. The chief contributors to the kindergarten display were the public schools of Albany, Port Chester, Rochester and Lansingburgh, the State Normal College of Albany, Teachers College of New York and the Elmwood School of Buffalo.

Along both sides of the south gallery aisle additional space was granted for many attractive wall exhibits. Chief among these was a set of library photographs, a large collection of graphic and printed charts prepared by the bureau, showing the status of public school education in the State, the educational map, and the fine exhibit of the Rochester Athenæum and Mechanics' Institute in drawing, painting, modeling, etc.

The exhibit of the New York Trade School was situated on this aisle, 163 feet east of the main exhibit, among other trade and mechanical schools. It occupied an alcove of about 700 square feet and was filled with specimen work of its students in plumbing, blacksmithing, painting, carpentry, stonecutting, bricklaying, printing and other trades. The work was of the highest character and reflected the greatest credit on the founders and officers of that institution.

On the same aisle, seventy-five feet west of the main exhibit, space was assigned the Rensselaer Polytechnic Institute, of Troy, and Pratt Institute, Brooklyn. It is greatly to be regretted that their space was not contiguous to the main exhibit, but some of the regulations of the liberal arts department in reference to collective exhibits rendered it impossible. The displays of both institutions were in the highest degree artistic and creditable, the former for the evident thoroughness and solidity of the work which has made its name famous, the latter for the development of modern and progressive ideas in youth training in all the many departments of the institution.

## SPECIAL FEATURES.

As before remarked, New York had all the usual exhibits of an educational nature, but was also particularly rich in its special features and new ideas. Chief among these were the following:

*Exhibit of Apparatus:* Comprised under three heads: *First*, minimum set of scientific apparatus which the University of the State of New York requires every school of academic grade to possess before it can be admitted to the University; *second*, standard set of academic apparatus, which the University recommends to its schools and requires them to approximate as fast as practicable. Both of these sets were

carefully selected by the inspectors of the University and formed an admirable basis for comparison with other States and countries. The apparatus was given to the exhibit by Einer & Amend of New York, with the condition that it was to be placed in the State Museum at the close of the exposition; *third*, home-made apparatus, illustrating 100 graded experiments in physics, chemistry and hygiene. The series might have been extended indefinitely, but enough was shown to accomplish the purpose of the bureau in planning it, viz., to prove what schools of limited means can do to illustrate scientific experiments. Prof. John F. Woodhull, of the Teachers College, supervised its preparation. The practicality of the exhibit was widely recognized, and it had no rival in the exposition, either for intrinsic merit or interest attracted.

*Administrative blanks and forms:* These were collected from the schools, colleges, villages and cities of the State and formed a comparative exhibit of the printed forms used in educational administration. The collection was of special value for information obtainable on reporting attendance and pupil's rank. It was the only complete exhibit of its kind at the fair.

*Charts:* Of course the chart idea was extensively used in all exhibits, but no State or country even approached New York in the vast amount of information tabulated on these charts or in the artistic workmanship and variety of pictorial representation found in the graphic charts. About twenty-five of the latter were made by the best skilled draughtsmen and were models of beauty and compact information. Printed charts were in abundance and gave concise information on all topics. The total number of charts was 150.

*Handbooks:* A series of handbooks were prepared for free distribution, giving the history, equipment, courses of study and other information concerning prominent institutions and educational systems of the State. The series numbered fifty-three. To secure uniformity the bureau bore the expense of composition and press work. They were seven and one-half by twelve and one-half centimeters in size, printed on the best coated paper, illustrated by photo-engravings of high artistic merit and were beautiful and compact souvenir volumes of the fair. They were an absolutely unique feature, and must in no way be associated with the usual publications and catalogues furnished for free distribution.

*Educational map:* A marvel of artistic work with pen and brush. It was fourteen feet square, and as a geographical map contained county and township outlines and chief river and mountain systems. The harmony of colors marking the counties and towns was highly artistic and attracted much favorable comment. On the map were indicated the location, grade and support of every educational institution in the State under the University of the State of New York or Department of Public Instruction. The grade of an institution was indicated by the form of the symbol, viz., a cross for a public elementary school, a triangle for schools of academic grade, a square for colleges, and a circle for universities. Method of support, whether by public funds, tuition, endowment, or tuition and endowment both, was

shown by the color of the symbol. Many minor details were also brought out. The map was handsomely framed and attracted wide attention by its beauty, scientific key and graphic clearness with which it presented New York's educational resources. The technical work was done by the scholars of the Albany High School, under the direction of Drawing Master T. C. Hailes.

*Phonograph:* The result of the experiment of presenting an actual representation of the musical work of schools by means of the phonograph was even more successful than its promoters hoped, and the value of that instrument for educational purposes received added proof. The methods of conducting class instruction and exercises were fully recorded, grade by grade, and the system illustrated by scores of songs and choruses. Albany, New York, Rochester and Syracuse were the representative cities selected to furnish tests. Wisconsin and Nebraska also used the phonograph for musical work, but New York's cylinders in number were double the others combined, and, in the opinion of the expert furnished by the North American Phonograph Company to inspect the machines, superior in quality.

*Historical exhibit:* This exhibit while not perhaps strictly educational was closely allied and formed an interesting and widely admired portion of the display. The principal part of it was contributed by the State Library and Columbia College. Prominent were fifteen oil paintings of the early champions of popular education whose influence and fame were by no means confined to State boundaries. Among them were George Clinton, DeWitt Clinton, Samuel Johnson, Gideon Hawley, T. Romeyn Beck, William Marcy and F. A. P. Barnard. Busts of Alexander Hamilton, William H. Seward, George Perkins and John T. Hoffman, done by Powers, Ives and other eminent sculptors were much admired. The links of the great chain stretched across the Hudson river at West Point during the Revolution to keep the British warships from ascending the river was easily the most popular exhibit in New York's territory. Charter to the Duke of York by Charles II, Major Andre's letters, emancipation proclamation, collection of twenty-five different photographs and engravings of Columbus, autograph letter of Washington and other relics and curios completed the display.

*Written work:* The written work which must necessarily form so large a part of the practical exhibit of a school was of special value in New York's case for two reasons: *First*, the portion prepared by the schools was certified regular work of the classes and was not "improved" for the exposition. In many cases the class exercises were collected at the close of the day, the teacher's statement of the nature of the work prefixed and the matter then sent to the binders. The question of showing a few selected best papers, as the ideal towards which the school was aiming, did not commend itself to the advisory committee. Such an exhibit may make a "good show," but it is not scientific. Neither is it valuable, for a person who does not know the character of the work receives a wrong impression of the standard of the school, and a person who does, examines it as a mere show piece and attaches no value to it. It was determined by the advisory committee to

UNIVERSITY AISLE, Looking East

show the work of a whole class in a subject as the rule and in no case to show the work of less than half the class. In every case the number of pupils in the class, and the number whose papers were exhibited were required to be stated; *second*, the remaining portion of the written work consisted of answer papers to the Regents' examinations, held throughout the State three times a year. These papers after being sent to the Regents' office, examined and recorded, were bound and placed in the exhibit. They served to show the Regents' system of examinations, as well as the standard maintained by the schools, were of undoubted genuineness, and consequently of more scientific value than any other collection of students' work. About 1,000 volumes of written work were shown.

*Photographs:* The photographic exhibit of the nature previously outlined, was the largest in the department, comprising no less than 3,500 photographs, the smallest, with few exceptions, being eight by ten inches and the majority eleven by fourteen inches. Nothing gives a better idea of an institution than good photographs, and the series of splendid buildings here portrayed caused great admiration, specially from foreigners, for New York's schools.

The complete system of signs, labels, numbers, indexes and cross-references to allied exhibits was a feature that caused New York to stand forth in striking contrast to other exhibits. The one general criticism on the fair was the lack of intelligible signs and explanations attached to exhibits. New York not only remedied this, but furnished a large staff of attendants who were always on hand to explain the work to visitors. Nine persons were on duty during the whole of the fair, and in July and August, the educational months, a larger force was employed. The University of the City of New York, Rensselaer Polytechnic Institute, Pratt Institute, Chautauqua and Oswego Normal School kept attendants with their exhibits at their own expense. Among the general staff were attendants speaking the principal foreign languages, a provision much appreciated by trans-Atlantic visitors.

The exhibit was also made the headquarters for New York people in the south end of the grounds. Reading tables, writing desks and postal and telegraph facilities were among the means employed for this purpose.

Under the head of special features mention should be made of the naval expedition of St. John's Military School, Manlius, to the exposition. A large lake steamer was chartered and fitted for the trip; about 100 cadets and officers sailed in her. The ship left Buffalo the latter part of June and lay off the shore of Jackson Park during the first half of July. Naval regulations and discipline prevailed throughout the entire voyage and it will readily be appreciated that it was the only kind of expedition that could succeed where careful supervision of a large school of boys was undertaken.

Another noteworthy enterprise was the presentation of the Latin play, "The Two Captives," by Plautus, by the students of the College of St. Francis Xavier, New York, an institution under the University of the State of New York. It was given before a critical audience at Music Hall, October nineteenth and twentieth, with decided success.

## VALUE OF AN EDUCATIONAL EXHIBIT.

What can you exhibit in school work and of what use is such an exhibit? These are not unnatural questions from any one who has given the subject little thought, and were asked many times during the last two years. It is certain that those who visited the liberal arts department at the Chicago Exposition bore away a satisfactory answer to the first question, and it is almost as certain that any one who examines the foregoing papers or the catalogue appended will receive an equal enlightenment. The latter question, however, is not so capable of ocular demonstration and will bear discussion.

The chief value of an educational exhibit is the opportunity of comparison. Courses of study, teaching methods and administrative methods from different parts of the State, the country and the world are arranged side by side; whatever is excellent secures a world-wide currency, whatever is bad is buried; rival systems are subjected to the closest scrutiny and many an "ism," fad or crotchet secures the stamp of legitimacy or the rejection of dross. There is the closest analogy to a commercial fair, the value of which is universally recognized. There is the same interchange of ideas, and of ideas illustrated by commodities, even if not the actual barter and sale of such commodities. It is not the commodity which produces the lasting benefit, but the idea which it represents.

The opportunity of studying the effect of innovations and experiments tried in other places is of great value. A school cannot evolve from its own life all the methods necessary for its best development, nor can it afford time to try all new features, however promising. One or two it may develop and contribute to the common good, but the rest it must take ready made from its compeers.

The great number of minor ideas in teaching methods, school machinery, school furniture, school books, etc., that are caught up and spread broadcast throughout the land are a positive benefit. One little change may be all that is effected in the individual school, but the sum total is enormous. Not a thing on exhibition, however small, but caused an expression of surprise from some visitor and a copying into a note book for future use.

From an historical point of view such an exhibit is invaluable: *First*, as showing the methods now in vogue compared with those of former years; and, *second*, as a base of comparison in future years. What would we not give for such a collection made twenty-five and fifty years ago? What a graphic history of education a series of such collections would present?

Incidental advantages of an exhibit are many. Prominent is the value to the institution itself of preparing such an exhibit. The interest aroused, the healthy rivalry excited and the deep concern in success or failure are high incentives to school loyalty and industry. When a pupil's interest is gained the battle is won, and a public exhibition is a device often used to stimulate flagging energy.

National, State and local pride are strong factors in the preparation of an exhibit, and though indirectly valuable to education itself, must

not be ignored in the argument. There is no reason why an *esprit de corps* should not exist in schools and render them invincible, as in a battalion.

The opportunity of winning the widest possible recognition of special and noteworthy features is of direct advantage to any school. It is a proper and commendable motive, notwithstanding an inclination in certain quarters to repress it. One of the most amusing features in the preparation of the exhibit was the anxiety of certain schools to be well advertised without appearing to advertise. There is no reason why a good school should hide its light under a bushel.

Such are some of the most apparent reasons why an educational exhibit is of value and why a permanent one should be maintained at every State's educational center. Those teachers who did not visit Chicago, or who, being there, failed to study the educational departments, missed an opportunity for improvement greater than they would care to acknowledge.

The transfer of New York's exhibit to the State Museum cannot fail to be of great benefit to the school interests of the State. The science of pedagogy is advancing rapidly. No man is now regarded as a competent teacher unless he possesses the ability to correctly gauge and analyze the pupil's mind and prescribe a proper course, just as a physician would diagnose the child's physical condition. To do this successfully the teachers of the State must have a museum where they can keep in touch with the latest methods and discoveries tabulated and collected from all parts of the world. With the splendid facilities at the disposal of the State Museum for collection and investigation, there is no reason why, with proper support from the Legislature and Board of Regents, a pedagogic department should not be built up second to none in the world.

## AWARDS.

The New York educational exhibit received careful attention from the judges and won seventy awards, a number far exceeding that of any other State. The awards were divided as follows: One to the exhibit as a whole, seven to the University of the State of New York, sixteen to colleges and universities, thirteen to academies and high schools, six to normal schools, nine to elementary schools of city systems, four to collective city systems, including both elementary and high schools, eight to private schools and six to miscellaneous features. New York schools were also foremost in the collective Catholic exhibit, winning no less than ninety-six awards. There is, unfortunately, no basis of comparison between the number of awards granted the parochial schools and those granted the public schools, inasmuch as each parochial or private school might receive an award, since it is under a separate government, while in a city like Rochester, for example, whose exhibit was made up by 100 elementary schools and one high school, only two awards could be granted under a department ruling, which held that city systems must be treated as a unit.

New York also received one award for institutions for blind, one for feeble-minded, one for deaf mutes, two for business schools and three

for art schools. This makes a grand total of 174 awards for New York's educational institutions.

The following awards were granted by the World's Columbian Exposition to schools and colleges exhibiting under the auspices of the educational bureau:

Albany Academy, Albany.
Albany Public Schools (High School).
Albany Public Schools (Elementary schools).
Albion Public Schools (Collective exhibit).
American Museum Natural History, New York city.
Berkeley School, New York city.
Binghamton Public Schools (High School).
Buffalo Normal School.
Buffalo Public Schools (Elementary schools).
Buffalo Public Schools (High School).
Buffalo Seminary, Buffalo.
Children's Aid Society, New York city.
Christian Brothers Academy, Albany.
Christiansen Institute, Brooklyn.
Coe, Miss E. M. (American Kindergarten), New York city.
Cohoes Public Schools (Collective exhibit).
College of the City of New York, New York city.
Colgate University, Hamilton.
Columbia College, New York city.
Cornell University, Ithaca.
Cortland Normal School.
Fredonia Normal School.
Harrison, William B. (chairs and desks), New York city.
Industrial School, Church Holy Communion, New York city.
Lansingburgh Public Schools (Collective exhibit).
La Salle Institute, Troy.
McClelland, Miss Mary, inventor, Albany Normal.
New York City Public Schools (Grammar schools).
New York City Public School (Manual training).
New York City Public Schools (Primary schools).
New York City Public Schools (Relief maps).
New York Military Academy, Cornwall-on-Hudson.
New York State (Collective exhibit). Albany.
New York State Library, Albany.
New York State Library School, Albany.
New York State Museum, Albany.
New York State Normal Schools, Albany.
New York Trade School, New York city.
Niagara University, Buffalo.
Normal College, New York city.
Oswego Normal School, (Collective exhibit).
Oswego Normal School (works of faculty and alumni).
Port Chester Public Schools (Collective exhibit).
Poughkeepsie Public Schools (Elementary schools).
Poughkeepsie Public Schools (High School).
Pratt Institute, Brooklyn.
Rensselaer Polytechnic Institute (general), Troy.
Rensselaer Polytechnic Institute (bridge designs), Troy.
Rochester Athenæum and Mechanics' Institute (Collective exhibit), Rochester.
Rochester Athenæum and Mechanics' Institute (drawings), Rochester.
Rochester Public Schools (Elementary schools).
Rochester Public Schools (High School).
Rochester University, Rochester.
Sach's, Dr., School, New York city.
St. Agnes School, Albany.
St. Catherine's Hall, Brooklyn.
St. Joseph's Academy, Flushing.
St. Mary's Academy, Ogdensburg.
St. Patrick's Academy, Catskill.
Syracuse Public Schools (Elementary schools).
Syracuse Public Schools (High School).
Teachers College, New York city.
University of the City of New York, New York city.
University of the State of New York (General, Administrative department, Examinations department, University extension), Albany.
Vassar College, Poughkeepsie.
Workingman's School, New York city.
Weil's, Mrs. Leopold, School, New York city.

## DIPLOMAS.

The wording of the diploma granted the New York educational exhibit as a whole, and of the seven granted the University of the

UNIVERSITY AISLE, LOOKING WEST

State of New York, as stated by the findings of the judges and juries of awards, are as follows:

To the educational exhibit of the State of New York an award is granted for the following specific points of excellence:

1. Comprehensiveness: In presenting a systematic exhibit of educational methods and results in all departments from kindergarten to university, including all institutions of secondary, superior and professional instruction under the Regents of the University, and all schools, primary, grammar or normal, under the direction of the Superintendent of Public Instruction.

2. Installation: In point of fine equipment for display and artistic arrangement of exhibits, covering 12,000 square feet of floor space, with handsome oak furniture and partitioning, the body of the walls being upholstered with purple, the State color.

3. Arrangement: A graded classification, thus presenting year by year a collective and comparative exhibit of school work from all parts of the State; its arrangement also typifies the organization, peculiar to New York, of departments and institutions.

4. Complete system of signs, labels, numbers, indexes and cross-references to allied exhibits.

5. Efficient management in providing a large corps of expert attendants and interpreters, speaking the principal foreign languages, and in the many provisions for making the exhibit the headquarters for New York educators.

6. Kindergarten and elementary schools: A complete exposition of the organization, government and work of the kindergarten, primary and grammar grades from the schools of Albany, Binghamton, Buffalo, Cohoes, New York, Plattsburgh, Poughkeepsie, Rochester, Syracuse, and many other places.

7. Schools of academic grade: Photographs, specimen work and courses of study from over 300 academies, high schools and union schools under the University of the State of New York; also, a similar display from many of the best private schools of the State.

8. Normal schools: Photographs, illustrative work, courses of study, methods and teaching devices from eleven normal schools.

9. Colleges and universities: Photographic, historical, statistical and literary displays from the following institutions: Columbia College, University City of New York, Cornell University, Hamilton College, Vassar College, Colgate University, University of Rochester, Teachers College, College City of New York, and Normal College.

10. Technical schools: Photographic, historical and statistical displays, together with specimen work of all departments from Rensselaer Polytechnic Institute, Pratt Institute, New York Trade School and Rochester Athenæum and Mechanics' Institute.

11. University of the State of Now York: An extensive and systematic exhibit of the organization, government and methods of each of the six departments, viz., executive, examinations, extension, State Library, State Museum and public libraries.

12. University extension: A valuable collective exhibit of forms, methods and examinations from the University of the State of New

York, Chautauqua, Catholic Summer School of America, University of Chicago, University of Edinburgh, People's Palace, London, and many other foreign and domestic societies and departments.

13. Photographic exhibit: Three thousand five hundred photographs of school grounds, exteriors, interiors, groups, classes at work, etc.

14. Written work: Nine hundred volumes of specimen work of students in all grades, specially valuable because certified as regular work of the classes and not "improved" for exhibition.

15. Phonograph: Giving reproductions of the methods of teaching music, with illustrative songs, choruses, etc., from the schools of Albany, New York, Rochester and Syracuse.

16. Manual training exhibit: A graded display of models and methods from Albany High School, Newburgh Free Academy, New York city public schools and Teachers College.

17. Apparatus: (*a*) Minimum and standard sets of approved scientific apparatus required by the University of the State of New York for schools of academic grade. (*b*) Graded display of models of "home-made" apparatus for illustrating scientific experiments.

18. Administrative blanks and forms: A comparative exhibit collected from the cities, towns, schools and colleges of the State.

19. Charts: One hundred and fifty handsomely executed graphic and printed wall charts, showing the history and present organization of education in New York.

20. Handbooks: A series of fifty-three handbooks, artistically printed and illustrated, giving the history, equipment, courses of study and other information concerning prominent institutions of the State.

21. Educational map: Showing the location, grade and support of every educational institution under the University of the State of New York and Department of Public Instruction.

22. Large collection of historical relics, curios, paintings and busts connected with education in New York.

To the University of the State of New York an award is granted for its collective exhibit:

1. For excellence and comprehensiveness in the exhibit of the five great departments — executive, examinations, extension, library and museum.

2. For an exhibit of the workings of a system by which the University of the State may incorporate and supervise universities, colleges, professional and technical schools, academies, high schools, libraries, museums, university extension centers and similar agencies, and by which it aims to maintain and protect the standard of academic honors and degrees and to prevent the use of the name "university" or "college" by schools without suitable facilities or powers, and to combine the advantages of central organization and supervision with entire freedom for individual and local initiative.

3. For a series of busts and portraits of the Regents of the University and for printed documents furnishing a roll of citizens of New York, distinguished in State and National affairs, who have served without salary as Regents of the University from its organization in 1784.

4. For the University Convocation of the State of New York for its organization, methods and the educational value of its annual conferences as recorded in the thirty-one volumes from 1863 to 1893.

5. For model desks, tables and office equipment, designed to afford a maximum of working convenience at small cost and in limited space.

To the administrative department of the University of the State of New York:

1. For a collective photographic exhibit of 2,000 pictures illustrative of the 484 teaching institutions in the University, and for sixty photographs illustrative of the five departments of the University.

2. For the exhibit of improvements in office labor-saving methods and appliances, and for administrative forms skillfully adapted to the peculiar work of the University and serving as efficient safeguards against accidental or intentional irregularities.

3. For valuable historical records and a series of printed and graphic charts, giving a survey of the entire educational work of the University.

4. For a series of annual reports since 1784, based on sworn returns from the institutions of the University, and specially for recent volumes, including a valuable exhibit of blanks, forms and methods for collecting full and accurate information, and for digesting and tabulating the same.

5. For a series of twenty-nine volumes on the zoology, botany, paleontology and natural resources of New York, as illustrating the progressive development of a survey of the resources of the State.

6. For a system of frequent printed bulletins issued in advance of the annual reports, thus giving early information of the proceedings of educational meetings and of legislation enacted or considered by any Legislature affecting educational institutions directly or indirectly.

7. For a series of pocket handbooks, giving compact, official information, with photographic illustrations of prominent educational institutions of the State.

To the examinations department of the University of the State of New York:

1. For excellence in the system of Regents' examinations to determine the standard of graduation from elementary to academic grade, and to test the instruction given by teachers in a way to stimulate the best work and the use of improved methods without impairing individuality in teaching.

2. For a carefully elaborated system of higher examinations offering official tests in over 400 localities, in all college and university studies, by examiners appointed from university and college faculties, successful candidates receiving credentials under seal from the University of the State.

3. For excellence of administrative methods by which examinations are prepared, conducted, recorded and recognized by graded credentials in a way designed to secure a maximum of valuable results with a minimum of the evils attending examinations.

4. For excellence of the system of credentials comprising a series of

fifty-one pass cards, certificates and diplomas, and for the artistic engraving and lettering of the same.

5. For methods of examinations for law and medical students, whereby the standard of admission to law and medical schools and graduation from the same has been raised, and for the registration and licensing system intended to protect the public against incompetency and fraud.

6. For over 20,000 answer papers in 200 bound volumes showing excellence of the work in over 100 subjects in academies, professional schools and extension centers.

To the extension department of the University of the State of New York:

1. For the educational system of the State which recognizes extension teaching, summer, vacation and correspondence schools, libraries, museums and other agencies for giving to adults at home and through life educational advantages which have usually been limited to the young and to those with time and means to attend to the ordinary teaching institutions.

2. For the exhibit of syllabuses, extension libraries, examinations, bound answer papers from extension students (including point print papers from the State Institution for the Blind), bulletins, circulars, charts and administrative forms illustrating the thorough organization of the various extension interests into a single department of the University.

3. For the comparative exhibit, illustrating by photographs, forms and various publications, the methods used by the leading extension organizations at home and abroad, especially by the two National summer schools, Chautauqua and the Catholic Summer School of America.

To the New York State Library for its extensive and valuable publications:

1. For the systems of bulletins making the resources of the library known, and serving as a guide to smaller libraries in selecting, cataloguing and classifying.

2. For its annual volumes of summaries of comparative legislation, giving clear, compact statements of every law on every subject, enacted in any State of the Union during the last session of its Legislature.

3. For the extensive exhibit of blanks and forms illustrating most efficient and economical methods of library administration.

4. For charts, tables, summaries and indexes of the decimal classification used in the State Library, illustrating the efficiency and economy of the system, and the co-operation in cataloguing and bibliographic work, made possible by the wide adoption of the system in this country and abroad.

5. For a prompt and inexpensive method of distribution of National, State and other desirable publications to the libraries of New York through the duplicate department, and for its general use as a clearing house for the libraries of the State.

COLUMBIA

6. For the system of traveling libraries, by which any community may borrow from the State for six months a carefully selected library, either general or on subjects of special interest to that locality, with annotated, printed catalogues and suitable cases and charging systems, thus increasing the efficiency of State aid by the itinerant principle which gives each community, at a minimum cost, a fresh library twice each year.

To the New York State Library School:

1. As the first school in the world established for the professional training of catalogners, librarians and assistants in the most approved methods of library work, and for the comparative study of library economy and bibliography.

2. For the system of giving instruction and advice from the State Library School, personally and by correspondence, to those interested in the establishment or improvement of any free library of the State.

3. For a series of fifty-nine printed and bound volumes, illustrating the quantity and superior quality of work by the alumni and non-graduates of the school since its opening in 1887.

4. For extensive and valuable manuscript work by its students, including bibliographies, theses, annotated and illustrated reading lists, note books, charts, tables, forms, summaries and indexes.

5. For the excellence of plan and beauty of execution in the exhibit of comparative cataloguing rules, showing the treatment of each point by each of the leading authorities.

To the New York State Museum:

1. For its extensive and valuable scientific publications, including memoirs, bulletins, annual reports since 1847, and specially for recent bulletins on building stones, mineral resources, salt industries, insects injurious to vegetation, and similar scientific treatises of practical economic value.

2. As an integral part of the educational system of the University, whereby specimens are given or loaned to schools, and opportunity for special study is offered at the museum, with limited instruction during vacations to teachers of science.

# CATALOGUE OF NEW YORK EXHIBITS IN DEPARTMENT L, LIBERAL ARTS.

## COLLECTIVE EXHIBIT.

GROUP 149. — EDUCATION.

Academy of the Sacred Heart, Syracuse.— Photographs, 9; Regents' papers, 1 vol.

Addison Union School.— Regents' papers, 1 vol.; photographs, 2.

Adelphi Academy, Brooklyn.— Photographs, 2.

Adams Collegiate Institute.— Regents' papers, 1 vol.

Afton Union School.— Regents' papers, 2 vols.; photographs, 1.

Akron Union School.— Regents' papers, 2 vols.

Albany Academy.— Apparatus used by Prof. Henry in developing the telegraph, 5 pieces; Beck Literary Society, 2 frames; course of study, 7 charts; photographs, 3 large; photographs, 10; Regents' papers, 1 vol.

Albany Female Academy.— One historical chart; one frame photographs; handbooks; photographs, 1; prize book awarded in 1819.

Albany High School.— Drawings, designs, etc., 247; photographs, 9; manual training, boys' department; manual training, girls' department; papers in Latin, algebra, geometry, trigonometry and English literature, 5 vols.; Regents' papers, 5 vols.; architect's plans and elevations.

Albany Law School.— Photographs, 1.

Albany Medical Department.— Photographs, 1.

Albany Normal College.—Photographs, 8. Kindergarten — clay modeling, 13 pieces; photographs, 1; pupils' work, 187 pieces.

Albany Public Schools.—Kindergarten — clay modeling, 63 pieces; photographs, 3; photographs of gift work, 3; pupils' work, 69 pieces. Elementary schools — photographs, 29; written work, arithmetic, 3 vols.; drawing, 12 vols.; geography, 2 vols.; history and physiology, 1 vol.; language, 3 vols.; designs, 26; forms and blanks, 21; statistics, 1 frame; bust of Columbus made by Edwin McCartan, aged 12 years, with photograph of artist.

Albany.—(See, also, Cathedral Academy, Christian Brothers' Academy, Cotrell & Leonard, St. Agnes' School, St. Joseph's Academy.)

Albion High School.— Photographs, 3; Regents' papers, 1 vol.

Albion Union School.— Catalogue (1892); drawing, 16 pieces; forms and blanks, 19 pieces; written work in mathematics, language and science, 1 vol.; written work in arithmetic, language, geography and U. S. history, 1 vol.

Alexander Union School.— Regents' papers, 2 vols.; photographs, 1.

Alfred University.— Regents' papers, 1 vol.; photographs, 14; photographs, 2 albums.

Allegany Union School.— Regents' papers, 1 vol.

Allegany.— (See St. Bonaventure's College.)

Allen School, New York.—Drawings, 6.

A. M. Chesbrough Seminary, North Chili.— Regents' papers, 2 vols.; photographs, 4.

American Museum Natural History, New York.— Photographs, 10 large.

American Society for the Extension of University Teaching.— Circulars; forms and blanks, 20; periodicals, 2 vols.; handbook, 1 vol.; proceedings of national conference, 1 vol.; syllabuses, 3 vols.

Amsterdam Academy.— Regents' papers, 1 vol.

Amsterdam Union School, No. 8.— Regents' papers, 1 vol.

Amsterdam Union School, No. 11.—Regents' papers, 1 vol.

Amsterdam Public Schools.— Forms and blanks, 11; Regents' papers, 1 vol.

Amsterdam Union Free School, No. 8. — Course of study, pam.

Amsterdam.— (See, also, St. Mary's Catholic Institute.)

Andes Collegiate Institute.— Regents' papers, 1 vol.

Andover Union School.— Regents' papers, 1 vol.

Angola Union School.— Regents' papers, 2 vols.

Angola Academy.— Photographs, 2; prospectus,

Annandale.— (See St. Stephen's College.)

Argyle Union School.—Regents' papers, 1 vol.

Arcade Union School.— Regents' papers, 1 vol.

Atlanta and North Cohocton Union School.— Regents' papers, 1 vol.

Attica Union School.— Photographs, 1; Regents' work, 1 vol.

Auburn Public Schools.— Forms and blanks, 14 pieces.

Auburn Theological Seminary.— Photographs, 2; handbooks.

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Aurora.— (See Wells College.)

Avon Union School.— Written work, 1 vol.

Babylon Union School.— Photographs, 1; Regents' papers, 1 vol.

Bainbridge Union School.— Photographs, 1; Regents' papers, 1 vol.

Baldwinsville Academy.— Circular, 1 pamphlet; written work, graded, 2 vols.; Regents' papers, 2 vols.; photographs, 1.

Bardeen, C. W., Syracuse.— Handbook, "Educational Journals of New York;" pam., "History of Educational Journalism in New York;" "School Bulletin," copies for distribution.

Barnard School, New York.— Forms and blanks, 9 pieces; maps, 2; written work in language, mathematics and penmanship, 1 vol.; photographs, 7. Publications — Catalogues, 1887–1893, 6 pams.; circular, 1891; commencement program, 1891; "dramaticale" program, 1891. Publications of students — Barnardaion, 1892–1893, 1 vol.; Barnard "Bric," 1888–1892, 1 vol.

Batavia Union School.— Regents' papers, 1 vol.; catalogue, 1891–1892, 1 pam.

Batavia Public Schools.— Forms and blanks, 4.

Bath.— (See Haverling Union School.)

Bath-on-the-Hudson Union School.— Regents' papers, 1 vol.; maps, 3; photographs, 3.

Bay Shore Union School.— Regents' papers, 1 vol.

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Belmont Union School.— Regents' papers, 1 vol.

Belleville.— (See Union Academy of Belleville.)

Berkeley School, New York.— Drawings, 21; penmanship, 9 pages; mineral specimens, 1 showcase; photographs, 37; prize drawings, 26; administrative forms, blanks and programs, 3 frames (large).

Berkshire, District No. 4.— Photographs, 1.

Binghamton High School.— Constructions in geometry, 1 showcase; architects' plans, 3; written work in English history and composition, 2 vols.; Regents' papers, 2 vols.; rock specimens and wood specimens from Broome county, 1 showcase.

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Brasher and Stockholm Union School.— Photographs, 1; Regents' papers, 1 vol.

Brasher Falls.— (See St. Joseph's Academy.)

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Brewerston School, Cicero.— Photographs, 1.

Brewster Union School.—Written work, 2 vols.; photographs, 1.

Bridge Hampton Institute.— Regents' papers, 2 vols.

Briggs Place School, Rochester.— Photographs, 1.

Brookfield Union School.— Regents' papers, 1 vol.

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Boonville Union School.— Regents' papers, 1 vol.

Brooklyn Institute of Arts and Sciences.— Architects' plans, 6; year books, 1888–1892, 4 vols.

Brooklyn Polytechnic Institute.— Photographs, 16.

Brooklyn.— (See, also, Adelphi Academy, Bedford Academy, Christiansen Institute, Convent of the Visitation, St. Catharine's Hall.)

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Buffalo High School.— Botanical drawings and herbariums, 2 vols.; drawings, maps, designs, 50 frames; Humane Society, 1 vol.; maps, 20; note books on physiology, 2 vols.; written work in English, 1 vol.; written work in mathematics, geography, languages, history and drawing, 4 vols.; Regents' papers, 15 vols.; societies, 1 vol.

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Buffalo University, Medical Department.— Photographs, 3.

Buffalo.— (See, also, Canisius College, Elmwood School, Le Couteaulx St. Mary's Institution, Niagara University, Elmwood School, Franklin and Buffalo Kindergarten.)

Caldwell, District No. 6.— Photographs, 1.

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Carmel.— (See Drew Seminary.)

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Castile Union School.— Regents' papers, 1 vol.

Castleton, District No. 6.—Photographs, 1.

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Catholic Summer School of America, Plattsburgh.— Forms and blanks, 18; plan of grounds; prospectus, 1893; publications, 7 pams.

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UNIVERSITY OF THE STATE OF NEW YORK

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College of the City of New York.— Large curriculum chart; photographs, 25; annual registers, 5 vols.; commencement address, 1888.

Columbia College, New York.— Statistical charts, 14; copper crown given to King's College by George III; handbooks; photographs, bromide enlargements, 26; photographs, 68 (buildings and interiors); photographs, 37 (miscellaneous); plan of new site (15 feet by 18 feet); plan of present site (4 feet by 3 feet), same scale; architect's plans of buildings, 4 portfolios; paintings of Samuel Johnson, William Johnson, Miles Cooper, F. A. P. Barnard, Henry Drisler; printed information from each faculty. Publications — handbooks, catalogues, reports, 26 vols.; School of Mines, Quarterly, vol. 12, 1891–1892; Columbia Law Times, vol. 6, 1892–1893; Columbia Spectator, 1 vol.; Faculty Physicians and Surgeons, 12 vols., 2 pams.; Faculty School of Arts, 50 vols., 8 pams.; Faculty School of Mines, 26 vols., 49 pams.; Faculty School of Political Science, 19 vols., 12 pams.

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Department of Public Instruction.— Annual Reports, 3 vols., 1885–1887; 1 vol., 1893; "Schools of New York."

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Educational Gazette.— Parts of vols. 7–9, 1891–1893.

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Lowville, State Street School.— Photographs, 1.

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Lyndonville Union School.— Photographs, 1; Regents' papers, 1 vol.

Lyons Union School.—Catalogue, 1891–1892, 1 pam.; clay modeling, 59 pieces; forms and blanks, 16; written work, 4 vols.; Regents' papers, 2 vols.; photographs, 1.

Lysander, District No. 16.— Photographs, 1.

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Malone Public Schools.— Maps, 2; written work, 1 vol.; photographs, 8.

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Manlius.—(See St. John's School.)

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Marlborough Public School.— Photographs, 2.

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Mayville Union School.— Regents' papers, 1 vol; photographs, 1.

Mechanicville Union School.— Photographs, 1.

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Morris Union School. — Regents' papers, 2 vols.; photographs, 1.

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Mt. St. Joseph's Academy. — Photographs, 1.

Mt. St. Mary's Academy, Newburgh. — Written work, 1 vol.; photographs, 1.

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New Hartford, District No. 1. — Photographs, 1.

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New York Institute for the Blind.— Photographs, 14.

New York Institute for the Instruction of Deaf and Dumb.— Photographs and art work.

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North Granville Seminary.— Regents' papers, 2 vols.; photographs, 1.

North Tarrytown Union Free School.— Drawing, 1 vol.; photographs, 1.

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Northern New England Chautauqua, Fryeburg, Me.— Photographs, 2 albums.

Norwich Public Schools.— Catalogue, 1882–1893, 1 pam.; forms and blanks, 4.

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Union College, Schenectady.—Students' publications — Concordiensis, 1892–1893, 1 vol.

University of the City of New York.— Apparatus; bust of Henry Draper; charts, statistical and historical; forms and blanks; electrical apparatus; geological maps; map showing location of university sites; photographs, 18; photograph of George B. Post, architect of Liberal Arts Building; photograph of J. W. Root, consulting architect of exposition; specimens showing process with daguerreotype by J. W. Draper; photograph of the moon by Henry W. Draper; photograph of the nebulæ of Orion by Henry W. Draper; photograph of work in spectrum analysis by Henry W. Draper; early photographic apparatus by J. W. Draper; photographs illustrating scientific experiments; chlorine-hydrogen photometer devised by John W. Draper; plans of new grounds and buildings. Publications — Handbooks; faculty of arts and science; Students' "Violet," '94; faculty of medicine; faculty of law, 106 vols.; old rare school books; oldest telegram in the world — original sheet in Morse alphabet; remains of the Morse battery; incubator from Loomis laboratory; teaching methods in law, medicine and science. School of Pedagogy —Anemometer used in study of ventilation; charts on history of education, French, German and American school systems; charts on study of the will power; diplomas; photographs; text books; theses, etc.

University of the State of New York.— Administrative department — Apparatus, minimum and standard academic, 2 cabinets; blanks and forms, 68; charts, statistical, 13; comptometer used in tabulating statistics; copying press; desks used in Regents' office and State Library; diplomas from Paris Exposition, 1889; fossils; models belonging to standard academic apparatus, 1 showcase. Handbooks for distribution: Address by Chancellor Curtis; Organization, Jan. '92; University law; Examinations; Practice of Medicine; Extension Department; Outline; New York State Museum; New York State Library. Photographs, 11; physiological manikin. Publications — Boundaries of the State of New York, 2 vols.; Regents' bulletin, 4 vols.; Convocation Proceedings, 1863–1892, 13 vols.; Historical and Statistical Record, 1784–1884; Meteorology, 1826–1863, 2 vols.; Regents' minutes, 1860–1869; Memorials to Chancellor George W. Curtis and Regent Francis Kernan; Regents' reports, 1835–1891, 57 vols.; University Manual, 3 vols. Portraits of Regents — Two engravings, Washington Irving, William Cullen Bryant; portrait of Chancellor George William Curtis. Paintings of Regents — George Clinton; Gideon Hawley; Martin Van Buren; Edwin D. Morgan; W. L. Marcy; Erastus Corning; De Witt Clinton; James King; Horatio Seymour; bronze bas relief of Regent T. Romeyn Beck; plaster bas relief of Regent John C. Spencer. Marble busts of Regents — Alexander Hamilton (by Horatio Stone); John T. Hoffman (by J. Nicolai); George R. Perkins (by Hiram Powers); William H. Seward (by C. B. Ives). Rock specimens belonging to standard academic apparatus, 1 showcase; spectra of chemical elements, Kirchkoff and Bunsen; tables used in Regents' office and library.

Examinations department — Blanks and forms; bulletins 1–4; charts, 9; credentials issued: pass card certificates, 18; diplomas, 16; blank forms, 1; law certificates and diplomas; medical certificates and blanks; questions, 2 vols.; questions and answers, January to March, 1893, 109 vols.

Extension department — Bulletins 1–5; charts, 3; circulars and blanks; examination papers, 18; examinations and answers, 5 vols.; photographs, 2; syllabuses, 23.

Library School — Bibliographies prepared by undergraduates; blanks and forms, 31; bulletin No. 1; chart; comparative catalogue rules, 2 vols.; credentials: pass card, 2 certificates, 1 diploma; examinations, 41 pieces; students' notes on reference work; photographs, 7; printed matter, 1884–1893, 2 vols.; printed work of students, 58 vols.; reading lists and catalogues prepared by students; selection of theses, 1 vol.

Public Libraries department — Blanks and forms, 1 vol.; catalogues of traveling libraries for distribution, Nos. 1–10; charging system of traveling libraries; photographs, 2; specimen traveling libraries, 6, containing 342 vols.

State Library — Blanks and forms for executive, accession, catalogue, reference, loan, binding and shelf departments, 132 samples; bulletin slips; card catalogues, subjects and names; catalogues formerly in use; chain stretched across the Hudson at West Point during the Revolu-

tion, 2 links; charging system, 2 trays, with readers' cards and call slips; chart, decimal classification; fac simile of emancipation proclamation; catalogues and idexes; pamphlet boxes and cases; photographs, 50 bromide enlargements; portraits of Columbus, 27. Publications — Bulletin, additions; bulletin, legislation; calendar of historical manuscripts, 3 vols.; calendar of land papers; catalogues, general and special, 8; Centennial celebrations; Decimal Classification, Dewey, M., documents relative to colonial history of New York, 15 vols.; Journal of the Legislative Council, 1696–1775, 2 vols.; annual reports, 1862–1889; Sullivan's Indian Expedition; Regents' file; oak case; shelf list sheets in binders.

State Museum — Geologic map of State, by James Hall; photographs, 12. Publications — Bulletins Nos. 1–10; Memoirs No. 1; Natural History of New York, 29 vols.; reports, 1847–1890, vols. 1–44; rock sections, 132; American woods, sections as arranged by R. B. Hough.

University Settlement Society, New York.— Forms and blanks, 32.

Utica Catholic Academy.— Regents' papers, 2 vols.; photographs, 5.

Utica Free Academy —Regents' papers, 1 vol.; photographs, 5.

Utica Public Schools.— Forms and blanks, 18; maps, 12; maps, relief, 9; maps, produce, 3; superintendent's report, 1891–1892.

Valatie Union School.— Regents' papers, 2 vols.; photographs, 1.

Vassar College, Poughkeepsie.— Administrative forms, 22; drawings, astronomical, 18; photographs, astronomical, 4; charts, statistical and descriptive, 6; charts, curriculum and entrance requirements, 3; embryology, 1 vol. sketches; embryology, 76 microscopic slides; handbooks; map of grounds surveyed by class of '78; microscopic slides in general biology and general zoology, 44; photograph of petrotome or rock-cutting machine; photographs, large, 15; photographs of scenes and characters from "Antigone," as given by Vassar students, 14; photographs (eight by ten), 53; photographs, taken by Vassar Camera Club, 271; plans of buildings, 4. Publications — "Addresses at Twenty-fifth Anniversary;" Annual Catalogue, 1892–1895; "Vassar College and its Founder," by B. J. Lossing; "Vassar Miscellany," vols. 1–21, 1874–1892; Vassar Verse, 1 vol.; "Vassarion," 1880–1892; quotation from Matthew Vassar, 1 frame; section of minerals and fossils, 33; zoology, 8 vertebrate skeletons; zoology, 1 vol. sketches.

Veltin's (Mlle.) School for Girls, New York.— Photographs, colored, 2 (large); photographs, 4; plans of building, 4.

Vernon Union School.— Photographs, 1.

Victor Union School. — Regents' papers, 1 vol.

Wallkill, District No. 5. — Photographs, 1.

Wallkill Free Academy.— Regents' papers, 1 vol.

Walden Union School.— Regents' papers, 1 vol.; photographs, 1.

Walton High School.— Photographs, 1; Regents' papers, 2 vols.

Walworth Academy.— Regents' papers, 2 vols; photographs, 2.

Warrensburgh Union School. — Regents' papers, 1 vol.

Warsaw Union School.— Herbariums; electroplating by chemistry class; Regents' papers, 2 vols.; photographs, 5.

Warwick Institute.— Regents' papers, 1 vol.

Washington Academy, Salem. — Regents' papers, 1 vol.; photographs, 1.

Waterford Union School.— Regents' papers, 2 vols.; written work, 1 vol ; photographs, 4.

Waterloo Union School.— Regents' papers, 2 vols.; photographs, 2.

Waterport Union School.— Regents' papers, 1 vol.

Watertown High School.— Regents' papers, 1 vol.

Watertown Public Schools.— Forms and blanks, 15; superintendent's report.

Waterville Union School.— Regents' papers, 1 vol.

Watervliet.— (See West Troy Union School.)

Watkins Academy and Union School.— Course of study, 1 pam.; Regents' papers, 2 vols.; forms and blanks, 8; written work, 2 vols.

Waverly High School.— Regents' papers, 2 vols.; photographs, 5.

Webster Union School.— Regents' papers, 1 vol.

Weedsport Union School.— Photographs; 1; Regents' papers, 1 vol.

Weil's (Mrs. Leopold) School for Girls, New York.— Written work, drawings and kindergarten work, 9 vols.; photographs, 5; sewing, 1 showcase.

Wells College, Aurora.— Photographs, 9.

Wellsville Union School and Academy. — Catalogue, 1892–1893, 1 pam.; photographs, 4; Regents' papers, 1 vol.

Westchester Union Schools, Nos. 1 and 3.— Regents' papers, 1 vol.

Westchester Union School, No. 3.— Written work, 2 vols.

Westchester Public Schools.— Sewing, 1 showcase.

Westfield Academy.—Regents' papers, 1 vol.

West Hebron Union School.— Regents' papers, 1 vol.

UNIVERSITY OF THE STATE OF NEW YORK

West New Brighton, District No. 3.— Photographs, 1.

Westport Union School.—Regents' papers, 2 vols.; photographs, 9.

West Troy Union School.— Regents' papers, 2 vols.

West Winfield Union School.— Regents' papers, 1 vol.

Whitehall Union School.— Regents' papers, 1 vol.

Whitesboro Union School.— Regents' papers, 1 vol.; photographs, 1.

Whiton & Bangs.— Patent school chair back.

Whitney's Point Union School.— Regents' papers, 1 vol.

Williamsville Union School.—Regents' papers: 1 vol.; drawing and designs, 24; fossils and Indian relics; herbarium; written work, 1 vol.; photographs, 1.

Wilson Academy.— Regents' papers, 1 vol.

Wilson Union School.— Regents' papers, 1 vol.

Windsor Union School.— Regents' papers, 1 vol.; photographs, 1.

Woodbridge School, New York.— Circulars, 2 pams.; forms and blanks, 5; essays, 1 portfolio.

Woodhull Union School.— Regents' papers, 1 vol.

Worcester Union School.— Regents' papers, 1 vol.

Workingman's School, New York.— Blanks and forms and certificates; charts, descriptive, 3; chronological chart of Greek history; crystals of various substances prepared by pupils; dissections of rabbit and frog, 4 specimens; drawing and designing, 61 pieces; drawing, free-hand, 86 pieces; drawing, mechanical, 63 pieces; drawing, maps, 26 pieces; geometrical constructions, cardboard, 15; handbooks; kindergarten work, 124 pieces; kindergarten work, paper folding, 192 pieces; kindergarden work, sewing, 64 cards. Manual training — Brass turning and lead casting (seventh grade); elementary carpentry (fourth and fifth grades); clay modeling, 39 pieces; constructive work, familiar objects (second grade), ladders, rakes, hammers, etc.; work in copper wire (fourth grade); lead forging (eighth grade); lead wire work (second grade); cutting and forming sheet metal (fifth grade); metal turning, chipping and filing (eighth grade); models for constructive work (first grade); models of household furniture (third grade); models of mechanical class, 8; paper folding, 33 pieces; scroll saw work (third and fourth grades). Sewing — Figure of "Phyllis," one-half life size, dressed in suit made completely by girls of seventh and eighth grades, thirteen to fifteen years of age; millinery and dressmaking, with 8 drawings; needlework, 44 pieces, including drawings; wood carving, elementary (sixth grade); wood turning (sixth grade); relief map (plaster), 1; relief maps (putty), 4; music, 8 sheets; written work, 4 vols.; patterns for physical apparatus (eighth grade); photographs, 17; water gauge.

Wylie's Kindergarten, Buffalo.— Beadwork; models and work, 12 frames; portfolios, 12 sheets; wirework.

Yates Union School.— Regents' papers, 2 vols.; "School Palladium," 1 vol.

Yonkers High School.— Regents papers, 1 vol.

# INDIVIDUAL EXHIBITS.

## GROUP 147.— HYGIENE.

**The exhibits under group 147 were installed in the Anthropological Building under the sub-bureaus of Hygiene and Sanitation and Charities and Corrections.**

American Book Co., New York; sanitary publications.

American Continental Sanitary Co., New York; antiseptics and disinfectants.

Amos, Alexander M., Buffalo; steam cooker.

David, William, New York; publications on ventilation and heating.

Heath, D. C., & Co., New York; hygienic publications.

Hunting, Nelson, Albany; automatic water-purifying apparatus.

Hydromaze Manufacturing Co., New York; hydromaze or health guard.

Improved Dwellings Co., New York; model and plans of improved dwelling for workingmen.

Macmillan & Co., New York; publications on sanitary subjects.

McConnell Filter Co., Buffalo; germ-proof water filters.

New York Columbian Cooking School, New York; model cooking in operation. Special building south of Anthropological Building.

New York Ladies' Health Protective Association, New York; models and photographs of abattoirs and of dust cart.

New York State Board of Health, Albany; maps, drawings and publications relating to public health.

New York State Commission, Albany; "Workingman's Model Home."

New York State, Commissioners of; *a.* models and maps of the Croton water system; *b.* model crematory for the dead, and model, photographs and plans of the quarantine system of the State of New York.

Peerless Steam Cooker Co., Buffalo; steam cooker.

Remington, Cyrus K., Buffalo; photographs of the Buffalo crematory.

Shaker Society, Mount Lebanon; photographs.

Tenement House Building Co., New York; drawings, plans and photographs of buildings.

Ward, H. A., Rochester; anatomical preparations.

Whitney Home Gymnasium Co., Rochester; home gymnasium cabinet.

Wilmot, Castle & Co., Rochester; sterilizers, steam cookers and bacteriological apparatus.

Woods, Justus O., New York; hygienic appliances.

Worthington, H. R., New York; sewerage pumps.

CLASS 831.— CARE AND TREATMENT OF THE POOR.

Associated Charities, Newburgh; literature.

Bureau of Labor and Charities, Syracuse; literature.

Charity Organization Society, Buffalo; literature and record blanks.

Charity Organization Society, New York city; literature, record blanks and plans of United Charities Building.

Fitch Créche, Buffalo; photographs, statistics, etc.

German Evangelical Home, Brooklyn; literature, plans and statistics.

Hebrew Orphan Asylum, New York; photographs, specimens of school work, uniforms, etc.

Hebrew Sheltering Guardian Society of New York city; orphan asylum photographs.

Hebrew Technical Institute, New York; photographs and specimens of school work.

Home for Aged and Infirm, Yonkers; photographs.

Home for Aged and Infirm Hebrews, New York city; charts and photographs.

Home for the Friendless, Buffalo; photographs and statistics.

Ladies' Deborah Nursery and Child's Protectory of the City of New York; photographs.

Letchworth, Wm. P.; model of the New York State plans for poorhouses.

Little Mothers at Work and Little Mothers at Play, New York; photographs and statistics.

Louis' Down Town Sabbath and Daily School, New York; photographs, statistics and specimens of school work.

Montefiore Home for Chronic Invalids, New York; literature, photographs and statistics.

New York Herald, New York city; photographs, history and statistics of the Free Ice Society.

New York House of Refuge, Randall's Island; drawings, maps, photographs and specimens of school work.

New York Kindergarten Society of the Hebrew Free School Association; charts and photographs.

New York State Charities Aid Association; annual reports.

New York State Board of Charities; maps, statistics and reports; see pages 444–448.

New York State Industrial School, Rochester; photographs, charts and specimens of school work.

New York State Soldiers' and Sailors' Home; topographical drawing and photographs of grounds and buildings.

Penny Provident Fund of the Charity Organization Society, Buffalo; statistics, appliances and record blanks.

Penny Provident Fund of the Charity Organization Society, New York; framed chart.

Sanitarium for Hebrew Children, City of New York; chart.

St. Vincent's Asylum, Syracuse; photographs and specimens of penmanship.

St. John's Guild of New York City; pictures. improved beds, etc.

United Hebrew Charities, New York; literature and record blanks.

Young Ladies' Benevolent Association, Auburn; one volume forms.

CLASS 832.— CARE AND TREATMENT OF THE MENTALLY DEFECTIVE.

Allen, Mary E., New York; invalid chair.

Binghamton State Hospital for the Insane, Binghamton; specimens of patients' work; see page 448.

Buffalo State Hospital for the Insane, Buffalo; photographs and statistics; see page 448.

Cancer Hospital for Women, New York; photographs and literature.

Fitch Accident Hospital, Buffalo; photographs and statistics and emergency bag for ambulance work.

New York Hospital Saturday and Sunday Asssociation, New York; statistics and appliances.

Sargent Manufacturing Co., New York city; hospital furniture.

Utica State Hospital, Utica; model of infirmary building, photographs, statistics, samples of patients' work; see page 448.

Willard State Hospital for the Insane, Willard; large picture of building; see page 448.

GROUP 148.— INSTRUMENTS AND APPARATUS OF MEDICINE, SURGERY AND PROSTHESIS.

Albany Chemical Co., Albany; pharmaceutical preparations.

Allen, C. D., New York; artificial teeth.

Daggett Table Co., Buffalo; posturing tables.

Davis, J. T. & A. H., New York; artificial eyes.

Deane, Henry F., New York; artificial teeth.

Drevet Manufacturing Co., New York; pharmaceutical preparations.

Elkins, Fanny, New York; colored anatomical drawings.

Evans, Geo., New York; crowns for teeth.

Fairchild Bros. & Foster, New York; digestive ferments, peptonised foods.

Frees, C. A., New York; artificial limbs.

Harvey, G. H., Co., Saratoga Springs; pharmaceutical preparations.

Harvey Human Hand Appliances Co., New York; trusses.

Johnson & Johnson, New York; surgical appliances.

Marks, A. A., New York; *a.* surgical appliances; *b.* artificial limbs; *c.* invalid vehicles.

Merck & Co., New York; pharmaceutical preparations.

Meyer, John H., New York; artificial teeth.

Modeman, Geo. H., New York; artificial teeth.

Mt. Sinai Hospital and Training School, New York; charts and reports.

Presbyterian Hospital and Training School, New York; hospital appliances.

Reed & Carnrick, New York; *a.* pharmaceutical preparations; *b.* food preparations.

Ritter Dental Manufacturing Co., Rochester; dental chairs and cases.

Seabury & Johnson, New York, medical, surgical and antiseptic specialties.

Standard Homeopathic Globule Manufactory, New York; globules, discs, etc.

The Tilden Co., New Lebanon; pharmaceutical preparations.

Ward, H. A., Rochester; skeletons; ossific preparations.

GROUP 149.— EDUCATION.

Art Students' League of New York, New York; students' work.

Baron de Hirsch Fund Trade School, New York; students' work.

Business Colleges; active exhibit and collective exhibit of students' work from colleges in Albany, New York and Rochester and other cities.

Catholic Educational Exhibit; students' work, courses of study, photographs, etc., from colleges, academies, parish schools, industrial schools, asylums, etc., from the dioceses of Brooklyn, Buffalo and New York.

Cooper Union, New York; students work, drawing, architectural sketches, models, etc.

New York, State of; educational exhibit of universities, colleges, professional and technical schools, high schools, academies, elementary schools, kindergartens and private schools; see full catalogue, pages 474 to 489.

School of Industrial Art and Technical Design for Women, New York; drawings and designs.

GROUP 150.— BOOKS, LITERATURE, ETC.

American Bank Note Co., New York; bank note engraving and lithographing.

American Book Co., New York; publications.

American Library Association, Albany; library blanks, books, comparative library architecture.

American Lithographing Co., New York; art and commercial lithographs.

Appleton, Daniel, & Co., New York; books.

Armstrong, Margaret M., New York; book covers.

Baldwin, Amos A., Brasher Falls; books.

Bardeen, C. W., Syracuse; school publications, maps, supplies, etc.

Bonaventure, E. F., New York; books, bindings, manuscripts, etc.

Britannica Publishing Co., New York; books.

Century Co., New York; books, magazines, drawings and materials.

Colby & Co., New York; historical charts.

Columbia College, New York; library book shelving.

Duprat & Co., New York; books.

Fishol, Adler & Schwartz, New York; engravings, etchings, etc.

Free Library of General Society of Mechanics and Tradesmen of New York; library system.

Funk & Wagnals, New York; English dictionary.

General Society Mechanics and Manufacturers, New York; books and catalogues.

Harper Bros., New York; *a.* books, magazines, drawings, engravings, etc.; *b.* illustrated papers.

Heffley, N. P., Brooklyn; phonographic text books.

Hubbard, H. F., New York, Administration Building, Pavilion C; *a.* magazines and newspapers; *b.* technical and industrial journals; *c.* illustrated newspapers; *d.* newspapers and statistics; *e.* statistics of journalism.

Judd, Orange, Co., New York; books and periodicals.

Kellogg, E. L., & Co.. New York; school books, charts, maps, appliances, etc.

Lieber, B., Franklin; telegraphic cipher and manual.

Lovell, A., & Co., New York; school books, charts, etc.

McDowell & Co., New York; fashion journals.

Manning, Thomas; American yacht list.

Manufacturers' Publishing Co., New York; directory of manufacturers.

Marks. Montague, New York; methods of illustrating an art magazine.

Moss Engraving Co., New York; engravings.

New York, State of; relief map.

New York State Library, Albany; library book shelving, books and catalogues.

Ottman, J., Lithographing Co., New York; lithographing establishment, showing entire process of making and printing lithographs.

Packard, S. S., New York; text books,

Plimpton, Geo. A., New York; historical collection of school books.

Radtke, Lauckner & Co., New York; etchings and engravings.

Schedler, Hermann, New York; *a.* lithographs; *b.* geographical globes.

Scholl, Bruno, Brooklyn; posters printed from wood.

Scribner's Charles, Sons, New York; books, magazines, manuscripts, drawings. engravings, etc.

Seeger-Guernsey Co., New York; cyclopædia of manufactures and products.

Tiffany & Co., New York; illuminations on parchment, copper and steel engraving, stamping, etc.

University Publishing Co., New York; school text books.

Wells, Charles R., Syracuse; system of penmanship.

Westervelt, A. B. & W. T., New York; library book shelving.

Wood, Wm., & Co., New York; medical books.

## GROUP 151.— INSTRUMENTS OF PRECISION.

Albertype Co., New York; albertypes.

American Aristotype Co.. Jamestown; photographs on aristopaper.

Andrews, E. R., Rochester; cameras and photographic apparatus.

Anthony, E. & H. T., & Co., New York; photographic apparatus and supplies.

Bates Mfg. Co., New York; numbering machine.

Bausch & Lomb Optical Co., Rochester; optical goods.

Breese, James H., New York; carbon portraits and reproductions.

Brooks, E. J., & Co., New York; post office stamps.

Crandall, Frank G., New York; photograph platinum print.

Dana, Edw. C., New York; photographs.

Davis & Cook, Watertown; spirit levels

Eastman Kodak Co., Rochester; photographic goods.

Eddy, Geo. M., & Co., Brooklyn; measuring tapes.

Ehrlich, David, New York; photographs.

Farnsworth, Emma J., Albany; amateur photographs.

Gerry, J. H., New York; astronomical regulator.

Gundlach Optical Co., Rochester; *a.* telescopes; *b.* photographic lenses; *c.* microscope stands, etc.

Gurley, W. & L. E., Troy; *a.* surveyors' instruments; *b.* civil engineers' instruments.

Heinrich, H. H., New York; marine chronometers.

Hohmann & Maurer Mfg. Co., Brooklyn; thermometers and steam gauges.

Keuffel & Esser, New York; surveying instruments and drawing material.

Kurtz, W., New York; photographs, crayon portraits, half tone engravings, etc.

McAllister, T. H., New York; stereopticans, magic lanterns, etc.

ACADEMY ALCOVE

[For Remainder of Educational Series of Photo-Engravings, see Pages 532-584.]

McMichel, H., Buffalo; photographic studies.

Meyrowitz, E. B., New York; microscopes, microtome, etc.

Pach Bros., New York; photographs.

Photo Material Co., Rochester; photographic apparatus and supplies, portraits, etc.

Radam, Wm., New York; microphotographs.

Self winding Clock Co., New York, self-winding astronomical regulator.

Slade, Elizabeth Almy, New York; amateur photographs.

Yates, Arthur P., Syracuse; bromide paint.

### GROUP 152.— ARCHITECTURE.

Baron, Henry, New York; Pennsylvania Railroad Company.

Dormitzer, Mrs. Henry, New York; window seats and platforms.

Emmet, L. F., New York; designs and drawings.

Gifford, Chas. Alling, New York; New Jersey State Building.

Gilbert, Bradford, New York; New York Central Railroad Building.

Hunt, Richard M., New York; Administration Building.

McKim, Mead & White, New York; Agricultural Building, New York State Building, White Star Building, Puck Building.

Post, Geo. B., New York; Manufactures and Liberal Arts Building.

Santi, Fillipo Luigi, New York; architectural plans.

Tracy, Mrs. Harriet Ruth, New York; model of passenger elevators.

Wilson, James G., New York; shutters, blackboards, doors, etc.

### GROUP 153.— GOVERNMENT AND LAW.

American Philatelic Association, New York; collection of stamps.

Cutler Manufacturing Co., Rochester; mail chutes and boxes.

International Postal Supply Co., New York; machine for stamping and canceling envelopes.

New York, State of, Comptroller's Office; reports, documents, historical data, etc.

New York, State of, Insurance Department; reports, documents, statistics, etc.

New York, State of, Treasurer's Department; documents, statistics, reports, etc.

New York House of Refuge, Randall's Island; samples of school and industrial work.

United States Trade Mark Association, New York; trade marks; literature and laws.

### GROUP 154.— COMMERCE, TRADE AND BANKING.

American Vending Machine Co., New York; vending machines.

Bates Manufacturing Co., New York; numbering machines.

New York Life Insurance Co., New York; theory of life insurance by charts, pyramids, etc.

### GROUP 156.

New York, State of; history of soldiers' monuments in the State of New York, with photographs.

### GROUP 157.

American Bible Society, New York; bibles, testaments and portions in various languages.

American Tract Society, New York; evangelical publications, methods of gospel work, etc.

Methodist Book Concern, New York; publications.

National Temperance Society and Publishing House, New York; books, pamphlets, tracts and charts.

Seventh Day Baptist Denomination, Alfred Center; books, papers, etc.

### GROUP 158.— MUSICAL INSTRUMENTS.

Automatic Piano Co., New York; piano and automaton attachments.

Bacon, Francis, New York; pianos.

Behr Bros. Co., New York; pianos.

Boardman & Gray, Albany; pianos.

Coleman, Henry, New York; brass musical instruments.

Dolge, Alfred & Son, New York; pianoforte materials.

Estey Piano Co., New York; pianos.

Fischer, J. & C., New York; pianos.

Friedrich, John, & Bro., New York; violins, violas, etc.

Foot, J. Howard, New York; flutes, guitars and band instruments.

Gemunder, August, & Sons, New York; violins, cellos, violas, guitars, etc.

Hardman, Peck & Co., New York; pianos.

Harrington, E. G., & Co., New York; pianos.

Hartmann Bros. & Reinhard, New York; guitars, zithers, mandolins, etc.

Herrgurger-Schwander & Son, New York; pianoforte actions and parts.

Jacob Bros., New York; pianos.

Kranich & Bach, New York; pianos.

Mannello, Angelo, New York; mandolins and mandolas.

Meneely, Clinton H., Bell Co., Troy; chime of bells.

Needham Piano-Organ Co., New York; *a.* pianos; *b.* reed organs.

Rogers, Joseph, Jr., Highview; banjo and drumheads.

Schubert Piano Co., New York; pianos.

Sohmer & Co., New York; pianos.

Strauch Bros., New York; piano actions.

Waterloo Organ Co., Waterloo; *a.* pianos; *b.* reed organs.

Wegman & Co., Auburn; pianos.

Wessell, Nickel & Gross, New York; piano actions and part.

Zimmermann, C. T., Co., Dolgeville; autoharps.

# REPORT ON THE NEW YORK INDIAN EXHIBIT.

By Rev. JOHN W. SANBORN, Director.

When the Dutch settled New Amsterdam in 1614 they found a republic in the wilderness whose Constitution and laws were free from complications which have so often led, among other races, to conflict — a Constitution framed to prevent political corruption, and which achieved, in the hands of its founders, eminent success in that important particular. The confederacy was in so complete a state when New York was founded that historians are justified in their conclusion that it had been previously in successful operation for many years. The Iroquois were called the Five Nations, and included the following tribes: Mohawks, Onondagas, Senecas, Oneidas and Cayugas. Their federal arms consisted of a bear, a deer, a wolf, a turtle, and a beaver.

The original piece of wampum made to commemorate the confederation of the five tribes, and which, therefore, antedates the Columbian discovery, is owned by Hon. John Boyd Thacher, of Albany, N. Y., and during the exposition was exhibited in the Government Building.

The Tuscaroras were of true Iroquois stock, and before the arrival of Columbus were reputed to have had 1,200 warriors. At a very early day the tribe migrated to the valley of the Mississippi, and thence, after many years, to the region in the south since known as North Carolina. In 1712 the white race overpowered the Tuscaroras and drove them out. After various vicissitudes the remnant of the tribe found its way to the country of the Five Nations, and obtained admission into the "Ho-da-no-sau-nee," or Long House, as the Iroquois league was termed. Thereafter the confederacy was known as that of the Six Nations. This reception of the Tuscaroras took place about the year 1715.

The league was founded to preserve internal peace and to resist the encroachments of foreign foes. A wise statesman has declared, after studying the Constitution of the league, that "it was the most consummate piece of statesmanship ever devised by the wit of man." Another says that "it is free from those complicated contrivances which have become necessary to those nations where deceit and cunning have increased as much as their knowledge and wisdom."

The league had its beginning among the Mohawks, the Onondagas and Senecas soon uniting with them. Afterwards the Oneidas were adopted by the Mohawks, and regard them as their fathers, while the Cayugas were adopted by the Senecas, and look upon them as their fathers. The Mohawks and Oneidas had each three families or clans, but the others had eight. Each family had its own peculiar ensign or mark, and the family sachem affixed that mark as his legal official signature.

Each nation was a republic by itself, governed by the sachems of the respective families. Majority rule did not prevail. All decisions were rendered unanimously, if at all. No bitter feeling was engendered,

because each sachem's opinion was fully respected. Honor and esteem were the rewards of merit; shame and contempt were the recompense of ill-desert. Each family bore the name of some animal or bird. The mark of a family was the animal whose name it bore.

No man could marry into his own family, or clan. The children followed the clan of the mother; therefore, no chief could be succeeded in office by his own son. All members of the wife's clan were her brothers and sisters; none of them, therefore, would go to war with each other. Neither would they war with her husband or with his family or clan, for that would be a family quarrel — an unheard-of occurrence. A half-brother to a sachem could succeed him, or a sister's son, or some other distant relative, but only through the female line. Matters of national importance were settled at conventions or councils of all the sachems. The grand councils are to this day held among the Onondagas. The sachems, or heads of families, number fifty in all. There has always been, among the Six Nations, an order of war chiefs or military leaders, whose authority came simply by virtue of their bravery and ability. The slightest cowardice on the part of one of them deprived a warrior of his rank as chief. The sachems are nominated in their respective clans by the eldest woman in each clan.

The Iroquois league held the balance of power on this continent in all the early struggles between the French and English, and threw its weight on the side of the latter. One of the most conspicuous and remarkable facts of American history is the fidelity with which the Iroquois held allegiance to the English. When Sir William Johnson died, to whom the Mohawks allied themselves, they linked their fortunes with Sir William's family, and followed them to the north, departing forever from their life-long abodes, and are now found along the St. Lawrence river. They are known as the St. Regis, or St. Francis Mohawks.

In 1677 the entire force of Iroquois warriors numbered 2,150. Never in the history of Greece or Rome, or any other nation of earth, have 2,000 warriors produced such results or wielded so mighty an influence over so wide a realm as the Iroquois in those palmy days. They conquered the territory from the Atlantic ocean to the Mississippi river, and not only called it theirs, but located representative chiefs, or consuls, throughout this wide domain, and levied tribute on conquered tribes. A dependent tribe on Long Island, 200 years ago, neglected to pay the customary tribute, and even dared to sell some land without consent of their conquerors. A Mohawk chief, in full war dress, appeared in their midst, convened their council, asked why the tribute had failed, demanded to know the name of the chief who first put his signature to the deed of sale, drew his tomahawk, and, approaching the chief who arose in confession to the signature, slew him. The council was paralyzed with fear, and the haughty Iroquois, without another word, turned into the forest and retraced his steps unmolested 200 miles to his own people. Such was the power of the league everywhere.

The league was a union of five tribes made up of clans, all forming one government, each tribe having local authority like our individual

IROQUOIS VILLAGE

States. There was a general council of sachems, fifty in number, of equal rank and authority. This council had supreme power in matters pertaining to the league. The fifty sachems held office perpetually. They had power to fill vacancies in the clans by elections, but only on the nomination of the eldest woman of the clan. These sachems could depose a chief for cause, but they could not invest a sachem with office; the general council did that. The sachems of any tribe, with the war chiefs of that tribe, formed the council of the tribe and had authority similar to that of a State Legislature.

All public acts became so only by the unanimous decision of the league. The sachems voted by tribes in the general council; thus, a small tribe had as much power as a large one. The council of each tribe had power to convene the general council, but the general council had not power to convene itself. The orators of the people had perfect liberty to discuss public questions before the general council, but only the general council could render a decision. Such, in brief, are the characteristics of the famous league of the Iroquois.

The present number of Indians belonging to the confederation is greater than ever before. It includes 8,483 in Canada, 5,187 in the State of New York, 98 in Pennsylvania, 225 in the Indian Territory, 1,716 in Wisconsin, and 79 elsewhere, making a total of 15,788.

Contact with the whites has caused the prestige of the league to wane, and the tribes have adopted in a measure a form of government similar to that of our own municipalities. The Senecas, for instance, have become a corporate body by act of Legislature, and are known as "The Seneca Nation of Indians." They have a president, secretary, treasurer, councillors, marshal, overseer of the poor and peacemakers.

The Tonawanda Indians are Senecas, and are settled in Genesee county. They hold to the old form of government by chiefs, with a slight admixture of modern government. The same is true of the Tuscaroras, Mohawks and Onondagas. The Oneidas hold their lands in severalty, and are pretty nearly sold out. The Cayugas are scattered among the other tribes, but chiefly among the Senecas, and have no separate government.

There are twenty-seven school houses on the reservations of the State and twenty-nine schools supported by the State. There is great need of a higher institution of learning among the Indians.

The New York Iroquois are self-supporting. Small annuities in goods and money are paid them by the United States government and by the State of New York. The Tuscaroras and Oneidas receive no annuities; the others get from all sources about $23,000 every year. Seven reservations of the State comprise 85,787 acres of land. A little more than one-third of this is under cultivation, while fully one-half of the Allegany reservation cannot be cultivated at all. The Tuscaroras are wards of the Senecas, and in 1808 the Seneca Nation transferred to them a tract of land one mile square, and the consideration therefor is set forth in the deed which they executed. This remarkable document reads: "The sachems and warriors of the Seneca Nation of Indians, in consideration of the love and affection which they bear unto the said Tuscarora Nation of Indians, have released and quit-claimed

all that tract of land situate in the township of Erie, county of Genesee, State of New York, on which part of the Tuscaroras now live."

The Six Nations are raising fair crops, as the following figures will show. During the year 1893 they cultivated 36,000 acres of land in New York State and produced 32,557 bushels of vegetables, 12,375 bushels of wheat, 28,625 bushels of corn, 26,050 bushels of oats and barley and 28,130 tons of hay.

These facts, though meager in comparison to what might be presented did space allow, will serve to emphasize the fact that the Iroquois, once powerful in war, are susceptible of improvement in all the arts of civilization, and it is matter of congratulation that they are eager for better things and learning to take kindly to the spirit of modern progress, and if such is their advancement under tribal government what may not be expected when they are free from the hampering restrictions which now bind them?

In view of the remarkable career of the Iroquois, and the maintenance intact of their famous confederacy amid all the conflicts between the French and English, and in view of the unwavering mutual fidelity between the settlers of New York and the Iroquois, it was eminently fitting that at the World's Columbian Exposition they should be properly represented, for they, more than any other race, are the connecting link between the days of Columbus and our own times.

The Indians are emerging from their former state of semi-barbarism and awakening to the better condition which is before them; the question, therefore, whether the New York Iroquois should represent at Chicago their ancient savagery, and go back to what they were 400 years ago, or show the progress which they have made and the civilization which they have attained, was difficult to determine; but, as director-in-chief of this exhibit, my conclusion was that it would be an injustice to our high-minded and self-respecting chiefs to require them to lapse into barbarism even for one summer for the sake of showing their past history. It did seem proper, however, that the most ancient bark houses should be erected, and that the people should dress in tanned deer skin suits of the genuine Iroquois pattern, while, at the same time, they gave daily exhibition of their progress in education, religion and the arts of peace. The thousands of visitors to this exhibit were, for the most part, astonished to learn that our Indians were capable of such improvement as was shown. One distinguished visitor, Hon. A. W. Ferrin, United States Indian agent for New York, said lately in his report: "Several Indians of different tribes have been at the fair, and have represented the improved life of the New York Indians since they dropped their savagery and barbarism. They have conducted themselves in a manner to give visitors a good opinion of their capability and to enlist the sympathy of strangers. They have been given full opportunity to visit the various departments of the exposition, and their experience will, no doubt, be of much benefit, not only to those who were selected to represent their respective tribes, but indirectly to the people at large."

In the preparation of the bark and poles necessary for the construc-

tion of the houses of the exhibit, Indians were employed as far as possible. The poles and bark for one house came from the Cattaraugus reservation, and were gotten out by Chief Nathaniel Kennedy. The material for the Long House and other dwellings came from Gorham and Naples, in Ontario county, the headquarters of the Seneca tribe in the earliest times. Here a large number of trails centered, and here the councils were frequently held. Twenty-three varieties of wood entered into the framework of the houses, viz., hemlock, beech, black birch, yellow birch, rock maple, soft maple, black cherry, hickory, slippery elm, swamp elm, black ash, white ash, dogwood, ironwood, black oak, red oak, white oak, poplar, basswood, whitewood, cucumber wood, butternut and chestnut. The siding of the houses was of basswood bark, one strip being thirteen feet six inches long and five feet six inches wide. The roofing was of elm bark. In order to avoid leakage bark spouts were placed under the joints made by the roofing. Five houses were put up, reproductions of the dwellings built by the Iroquois 400 years ago. Two of the dwellings were oblong, each ten feet wide and fifteen feet long. Two houses were circular, each being fourteen feet in diameter. One of these was surrounded with a single, double and triple stockade such as served for defense in early days.

The Long House, or "Ho-da-no-sau-nee," was twenty feet wide and forty-five feet long. It was patterned after the earliest known council house which stood more than 200 years ago on the site of Albany. There were no complete plans of the ancient houses except as they could be gathered up in fragments here and there. In drawing plans for these houses the director-in-chief made use of such information as he has been gathering in the past sixteen years supplemented by the experience of some of the most expert builders among the Iroquois. Neither nails nor pins entered into the construction of the bark houses. The rafters, poles, posts, bark roofing and siding were securely fastened with withes of hickory and slippery elm.

On account of the difficulty of peeling bark before the first of May, the exhibit was not properly installed until July. The location of the camp was selected by the chief of the department of ethnology at Chicago, Professor F. W. Putnam, of Cambridge. The site for the camp was a grassy plat fronting on the South Pond and easily reached by the Intramural railroad. The four canoes, made after the primitive manner by our Indians, attracted much attention, and the similarity between these and the old canoe which was among the Columbian relics in the yard of the Convent La Rabida was striking proof that the Iroquois dug-out canoes in our exhibit were true to history, for without doubt Columbus' models were patterned after those of the Indians.

Fourteen Indians were engaged to form the colony from the Six Nations of the State, but five of them were not ready when the time of departure came. Later on others joined the force, making the representation twelve in number. Among them were the following: Solomon O'Bail, a Seneca, the grandson of the distinguished chief "Cornplanter" who treated with General Washington. Washington caused a medal to be struck in recognition of Cornplanter's services to

the Colonial government, and the Legislature of Pennsylvania made a grant of land to him in return for services rendered to that State. Chief O'Bail is seventy-eight years old and is a man of remarkable mind.

Chief Lewis Bennet, known to the world as "Deerfoot," was also in our camp. He is the champion long distance runner of the world, having run eleven and a half miles and ninety-nine yards in one hour. This remarkable feat was performed about thirty years ago in the presence of the Prince of Wales and other notables. At the conclusion of the race the prince gave a dinner in honor of "Deerfoot," at which he was greatly lionized. He is from the Seneca tribe and is sixty-five years old.

Chief Luther W. Jack is a Tuscarora sachem about thirty years of age and of magnificent proportions. He has for some time been the secretary of the Six Nations. His wife, Louisa Jack, also a Tuscarora, is skillful with her needle, and an adept at beadwork and other ornamentation.

Chief Daniel LaFort is probably the best Indian linguist in America. He converses fluently in any one of the six languages of the Iroquois. He is the president of the Six Nations, wields a commanding influence. and decides who shall speak in the councils, and how long. At general councils chiefs are present from six tribes, whose languages are distinct one from the other. Suppose a speaker to be a Mohawk, and any one of the others to be unacquainted with that language, Chief LaFort promptly interprets into the language of the one who does not understand, and in this way every representative present knows what has been said. Chief LaFort's grandfather was a famous chieftain, and his father, also distinguished, was a graduate of Hobart College, Geneva.

There were also present Chief Williams, a Tuscarora, the vice-president of the Six Nations; Emeline Garlow, a Tuscarora; Myron Silverheels and Ananias, his son, both Allegany Senecas; Emeline Patterson, a bright Mohawk girl, who at the close of the exposition began a course of study at the Carlisle school; Mrs. Kittie Coates and Mrs. Emma Reeves, skillful basket makers and singers.

The chiefs were constantly questioned about their customs, history and social life, and by their intelligent answers, courteously given, did much to further the laudable purpose in view in the installation of this exhibit. They explained the peculiar uses of the articles on exhibition, and performed certain of the most interesting ceremonies peculiar to the Iroquois.

On the 28th day of October, 1893, a council was convened at the camp at Jackson Park by President LaFort and the other chiefs. They were dressed in their buckskin costumes, bedecked with feathers, and gathered around a huge council fire which burned in the center of the council house. The council was called for the purpose of adopting Mr. Will Carleton, the poet, and Mrs. Carleton, into the Six Nations. Chief Jack made a brief speech introducing the candidates to the Indians; Chief Bennet led them back and forth, dancing the war dance and singing the war song, while the rest of the Indians kept

IROQUOIS VILLAGE, "HO-DA-NO-SAU-NEE," OR LONG HOUSE

time to the stepping with grunts of approval. An elaborate ceremony was performed, after which their names were announced, his being *Da-dyu-gwat-ha*, "he writes for all the world," and hers, *Yei-wa-noh*, "his protector."

These ceremonies illustrated to the people, more clearly than any word description could do, the customs which have always prevailed among the Indians.

To the credit of the Iroquois who represented the Six Nations in this exhibit, it should be said that during the entire summer there was no occasion to administer discipline in a single instance for intoxication. Our people carried themselves with perfect propriety, and when the camp broke up the first of November, and the Indians started for home, Chief Solomon O'Bail expressed himself as follows: "Had good time all summer; no mad words; good time."

Before concluding this report, it should be stated that I have been ably and faithfully assisted in the arduous labors incident to the preparation of the buildings, and the maintenance of the exhibit, by Mr. J. H. Masten, of Steuben county, New York.

# CATALOGUE OF NEW YORK EXHIBITS IN DEPARTMENT M, ETHNOLOGY.

## INDIVIDUAL EXHIBITS.

De Potter, Armand, Albany; Egyptian antiquities.

Ingraham, D. P., Elmira; pottery, from mound in Yucatan.

Kinney, Mrs. Louise Cathie, New York; 28 pictures of Indian life by George Cathie, the famous painter of American Indians fifty years ago.

### SECTION OF ANCIENT RELIGIOUS GAMES AND FOLK LORE.

Dick & Fitzgerald, New York; books about games.

Horseman, E. J., New York; exhibit of games.

Kunz, George F., New York; collection of gems and precious stones, illustrating the folk lore of the subject.

Van Rensselaer, Mrs. J. K., New York; exhibit of playing cards from Leo collection.

### SECTION OF PHYSICAL ANTHROPOLOGY.

Bausch & Lomb Optical Co., New York; shutter.

Columbia College, New York; photographs of laboratory equipment.

Cornell University, Ithaca; photographs of laboratory equipment.

Giles, J. E., New York; casts.

Hunter, D. W., New York; optical apparatus.

Jefferson, C. S., New York; optical apparatus.

Meyrowitz Bros., New York; optical apparatus.

Northrup, W. P., New York; children's brains.

Spitzka, E. C., New York; statistical data, brains of anthropoids.

Ward's Natural Science Establishment, Rochester; skeletons and models.

Webb's Adder Co., New York; adding machine.

Wood, Wallace, New York; composite statues.

### SECTION OF ETHNOGRAPHY.

New York State Exhibit; Iroquois village of bark houses in which are living representatives of the Six Nations; bark canoes and dugouts on South Pond.

### SECTION OF HISTORY.

Kimball, W. S., Rochester; collection of antique pepper boxes.

Scott Stamp and Coin Co., New York; coins, postage stamps, etc.

### SECTION OF NATURAL HISTORY.

Hart, W. W., & Co., New York; group of mounted otter, heads of musk ox, moose and caribou.

Lattin, F. H., Albion; typical collection of North American birds, showing manner of nesting, collection of birds' eggs, naturalist's supplies, etc.

New York State Museum; mammals of the State, land and fresh-water shells.

Ward's Natural Science Establishment, Rochester; general natural history cabinet, occupying the entire south gallery.

# REPORT ON THE ZOOLOGICAL EXHIBIT.

By WILLIAM B. MARSHALL.

In the department of anthropology and ethnology at the World's Columbian Exposition the New York scientific exhibit consisted of three parts, viz.:

I. The mastodon found at Cohoes, N. Y., in 1866, and presented to the New York State Museum by Alfred Wild in the name of the Harmony Mills Company of Cohoes. The twenty-first annual report of the State Cabinet contains a history of this specimen.

II. A collection of stuffed animals illustrating the present and historic mammalian fauna of this State. Most of the specimens shown in this collection are from New York localities, but a few, especially of those animals that are now extinct in New York, are from localities outside of the State.

III. A collection of the land and fresh-water shells of New York.

The specimens shown in these exhibits were loaned under proper authority by the New York State Museum. The shells were derived chiefly from the extensive collections presented to the museum in 1886 and 1887 by Dr. Charles E. Beecher, but valuable contributions of specimens were received from the following gentlemen: Rev. W. M. Beauchamp, Baldwinsville; Mr. Shelley Crump, Pittsford; Mr. T. M. Fry, Syracuse; Mr. W. S. Teator, Upper Red Hook; Mr. Albert Bailey, Chepatchet; Dr. S. Hart Wright, Penn Yan; Mr. James Delaney, Rochester; Prof. George H. Hudson, Plattsburgh; Rev. John Walton, Rochester.

Lists of the collections of mammals and shells are appended hereto.

Didelphys virginiana, *Shaw*, opossum; male and female.

Lepus sylvaticus, *Bach.*, wood hare; three specimens.

Lepus americanus, *Erx.*, northern hare; one specimen.

Erethizon dorsatus, *Linn.*, Canada porcupine; male and albino.

Zapus hudsonius, *Coues*, jerboa; one specimen.

Fiber zibethicus, *Linn.*, muskrat; male and female.

Fiber zibethicus, *Linn.*, muskrat; one specimen.

Arvicola pinetorum, *Le C.*, pine mouse; one specimen.

Arvicola riparius, *Ord*, meadow mouse; male, male-albino and female.

Evotomys rutilus gapperi, *Coues*, red-backed mouse; one specimen.

Hesperomys leucopus, *Raf.*, white-footed mouse; one specimen.

Mus musculus, *Linn.*, common mouse; male and female. Introduced from Europe.

Mus decumanus, *Pallas*, brown rat; male, male-albino, female, female-pied. Introduced from Europe.

Neotoma floridana, *Ord*, wood rat; one specimen.

Castor fiber, *Linn.*, Beaver; group of two males, one female, two young. Extinct in New York. (See note I.)

Arctomys monax, *Linn.*, woodchuck; one specimen.

Tamias striatus, *Linn.*, chipmunk; three specimens.

Sciurus hudsonius, *Erx.*, red squirrel; male, female and albino.

Sciurus carolinensis, *Gmel.*, grey squirrel; five specimens.

Sciurus niger, *Linn.*, fox squirrel; five specimens.

Sciuropterus volucella, *Gl.*, flying squirrel; male and female.

Sorex platyrhinus, *De Kay*, broad-nosed shrew; one specimen.

Scalops aquaticus, *Linn.*, shrew mole; two specimens.

Scapanus americanus, *Bartram*, hairy-tailed mole, three specimens.

Sorex carolinensis, *Bach.*, Carolina shrew; male.

Condylura cristata, *Illiger*, starnose mole; three specimens.

Vespertilio subulatus, *Say*, little brown bat; male and female.

Vesperugo noctivagans, *Le C.*, silver-haired bat; male and female.

Atalapha noveboracensis, *Erx.*, New York bat; male and female.

Atalapha cinerea, *Bean*, hoary bat; male.

Cariacus virginianus, *Bodd.*, Virginia deer; male. Extinct in New York.

Cervus canadensis, *Erx.*, wapiti or elk; male and female. Extinct in New York. (See note II.)

Alce alces, *Linn.*, var. americanus, *Jardins*, moose; male and female. (See note III.)

Bison americanus, *Gmel.*, American bison, or buffalo; male and female. Formerly abundant in most parts of the United States; now extinct, except a few in the Yellowstone region.

Phoca vitulina, *Linn.*, harbor seal or common seal; male. Formerly abundant in the Hudson river and Long Island sound, but rarely seen at present. (See note IV.)

Cystophora cristata, *Gmel.*, hooded seal; male and female. An accidental visitor to Long Island sound. (See note V.)

Procyon lotor, *Linn.*, raccoon; male and female.

Ursus americanus, *Pallas*, black bear; male

Lutra canadensis, *Turton*, American otter; female.

Mephitis mephitica, *Shaw*, skunk; male and female.

Gulo luscus, *Brisson*, wolverine or glutton; male. Extinct in New York. (See note VI.)

Mustela americana, *Turton*, sable or pine martin; male.

Mustela pennanti, *Erx.*, fisher or black cat; male and female.

Putorius vison, *Schreber*, mink; three specimens.

Putorius erminea, *Linn.*, ermine, weasel or stoat; five specimens.

Putorius nivalis, *Linn.*, least weasel; one specimen.

Vulpes fulvus, *Des.*, red fox; male and female.

Urocyon cinereo-argentatus, *Schreber*, gray fox; male.

Canis lupus, *Linn*, wolf; two males. Nearly extinct in New York. (See note VII.)

Lynx canadensis, *Des.*, Canada lynx; male.

Lynx rufus, *Guld.*, wild cat, or bay lynx; male and female.

Felis concolor, *Linn*, panther, cougar or puma; male, female and kittens. Nearly extinct in New York. (See note VIII.)

## NOTE I.

### THE BEAVER.

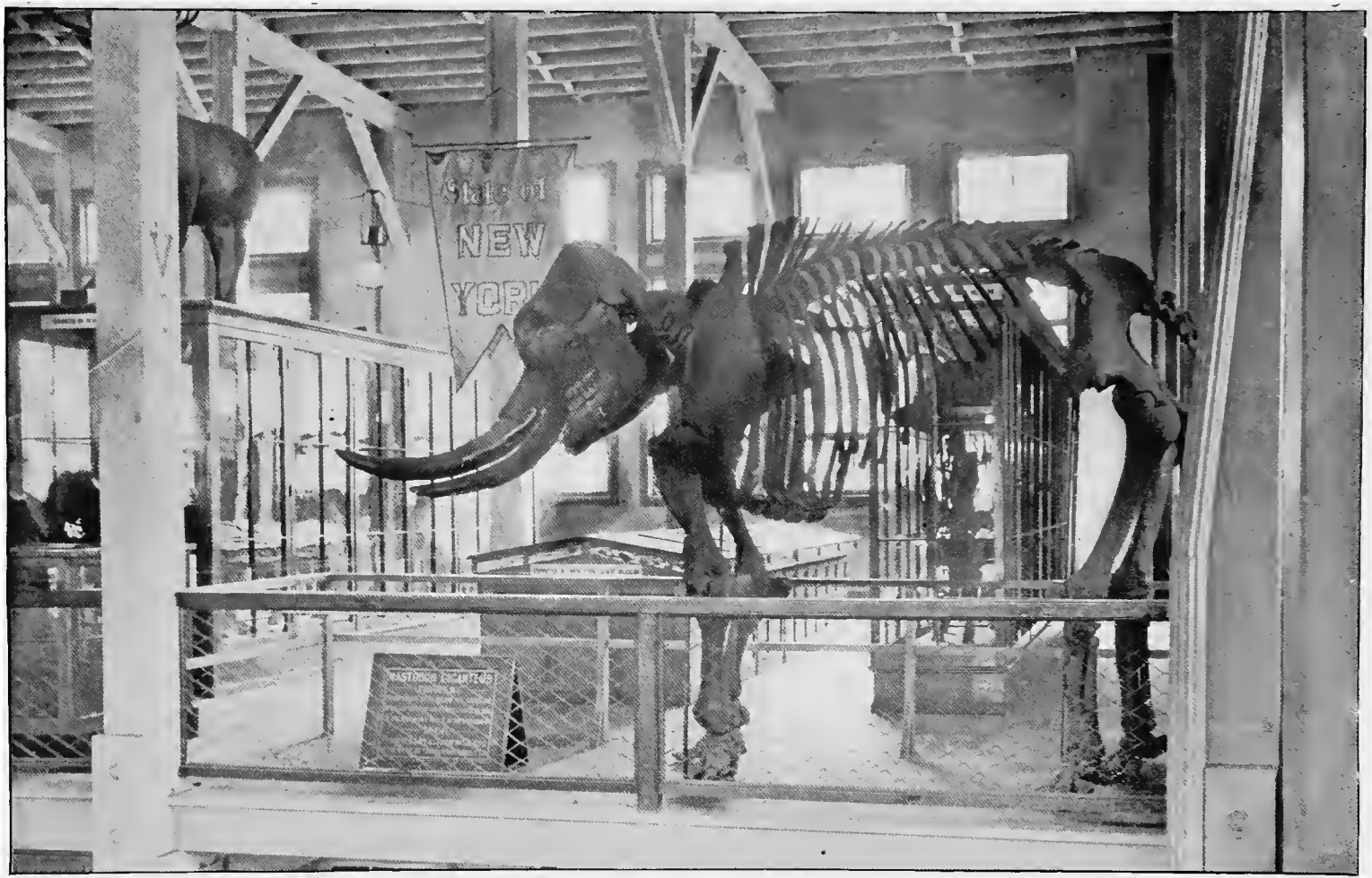
"According to a letter from the Dutch West India Company, preserved in the Albany Records, we learn that in 1624, 400 beavers and 700 otter skins were exported; the number increased in 1635 to 14,891 beaver and 1,413 otter skins; and the whole number in the ten years was 80,183 beavers and 7,347 otters, amounting in value to 725,117 guilders." — De Kay, Zoology of New York, 1842.

The beaver, once abundant and of great commercial importance, is still, perhaps, entitled to be considered an inhabitant of New York. "At present there is a small colony of beavers on a stream that empties into the west branch of the St. Regis river. It is probably the colony referred to by De Kay in 1842, as 'yet existing in the southern part of Franklin county.' It is to be earnestly hoped that the hunters who frequent that part of the wilderness will spare no pains to protect these animals from molestation." — Merriam, Mammals of the Adirondacks, 1884.

## NOTE II.

### THE WAPITI, OR AMERICAN ELK.

"The stag is still found in the State of New York, but very sparingly, and will doubtless be extirpated before many years. Mr. Beach, an intelligent hunter on the Racquet, assured me that in 1836 he shot at a stag (or, as he called it, an elk) on the north branch of the Saranac. He had seen many of the horns, and described this one as much larger than the biggest buck (C. virginianus), with immense long and rounded horns, with many short antlers. His account was confirmed by another hunter, Vaughan, who killed a stag at nearly the same place. They are found in the northwestern counties of Pennsylvania, and the adjoining counties of New York.




SCIENTIFIC EXHIBIT

In 1834, I am informed by Mr. Philip Church, a stag was killed at Bolivar, Allegany county. My informant saw the animal, and his description corresponds exactly with this species." — De Kay, Zoology of New York, 1842.

"That the American Elk, or Wapiti (Cervus canadensis), was at one time common in the Adirondacks, there is no question. * * * When the species was exterminated here is not known. * * * I do not regard the account of Messrs. Beach and Vaughan as trustworthy, for the reason that I have never been able to find a hunter in this wilderness, however aged, who had ever heard of a living elk in the Adirondacks." — Merriam, Mammals of the Adirondacks, 1884.

## NOTE III.

### THE MOOSE.

The male moose exhibited was killed in the town of Ohio, Herkimer county, New York, in January, 1851. Ten years later the moose was exterminated in New York.

## NOTE IV.

### THE HARBOR SEAL, COMMON SEAL.

Harbor seals "are now comparatively rare in our waters, but were formerly very abundant. A certain reef of rocks in the harbor of New York is called *Robbins reef*, from the numerous seals which were accustomed to resort there, *robin* or *robyn* being the name in Dutch for seal. At some seasons, even at the present day, they are very numerous, particularly about the Execution Rocks in the Sound, but their visits appear to be very capricious. * * * In the Kingston (U. C.) *Chronicle* of February, 1823 or 1824, there is a notice of a seal having been taken on the ice on Lake Ontario, near Cape Vincent (Jefferson county), this State. The paper gives no description, but asserts, on the authority of Indian traders, that seals have heretofore been seen on the borders of the lake, though the circumstance is one of rare occurrence." — De Kay, Zoology of New York, 1842.

According to the Natural and Civil History of Vermont, a seal was captured on the ice on Lake Champlain, a little south of Burlington, in February, 1810, and one was killed upon the ice between Burlington and Port Kent, in February, 1846.

"During the past winter one was killed on Onondaga lake that must have reached this remote inland water by way of Lake Ontario.

"I have seen many of these seals in Long Island Sound, chiefly upon the Thimble Islands; and March 25, 1879, I saw one on a rock in the Hudson river, near Sing Sing." — Merriam, Mammals of the Adirondacks, 1884.

According to newspaper reports a harbor seal was killed in the Hudson river at Hyde Park in the spring of 1893.

## NOTE V.

### THE HOODED SEAL.

De Kay's description of the hooded seal "was taken from an adult male captured near Eastchester, about fifteen miles from the city (New York) * * * The preceding must be considered as the first notice of its existence within our territorial limits, where it can only be regarded as a rare and accidental visitor. — De Kay, Zoology of New York, 1842.

So far as known this is the only record of the occurrence of the hooded seal in New York.

## NOTE VI.

### WOVERINE, GLUTTON, CARCAJOU.

"Although we have not met with this animal, yet hunters who have killed them repeatedly, and knew them well, have assured us that they are still found in the districts north of Racquet Lake. It is, however, everywhere a rare species. Prof. Emmons states that they still exist in the Hoosac mountains, Massachusetts. * * * The Wolverine was formerly found as far south as Carolina, but its southern limits at present do not extend south of the forty-second degree." — De Kay, Zoology of New York, 1842.

"The Wolverine (*Gulo luscus*) is not now an inhabitant of the Adirondacks, and I have been unable to find among the hunters and trappers of this region any one who has ever seen it in our wilderness. * * * Dr. Bachman killed one, about the year 1811, in its den in a ledge of rocks in Rensselaer county."—Merriam, Mammals of the Adirondacks, 1884.

## NOTE VII.

### THE WOLF.

The wolf still occurs sparingly in the Adirondacks. Several packs were reported in the newspapers in the winter of 1890–1891. The Game Law of 1892 offers a bounty of thirty dollars for each grown wolf and fifteen dollars for each pup wolf.

## NOTE VIII.

### THE PANTHER, PUMA, COUGAR.

"A full grown male panther, weighing 150 pounds, was shot in Stone Lane, within the Schenectady city limits, Saturday afternoon. The animal is thought to have strayed from the Adirondacks."—Albany Press and Knickerbocker, Tuesday, September 5, 1893. The Game Law of 1892 offers a bounty of twenty dollars for each panther killed in the State.

# CATALOGUE OF NEW YORK EXHIBITS IN DEPARTMENT M, ETHNOLOGY.

## LAND AND FRESH-WATER SHELLS.

### I. FRESH WATER-BIVALVES.

Order ASIPHONIDA. Class PELECYPODA. Family UNIONIDÆ. Genus UNIO, *Retzius*.

Unio alatus, *Say*, Genesee river; Pickett collection.

Unio alatus, *Say*, Pittsford, Monroe county; Shelley G. Crump.

Unio alatus, *Say*, Lake Champlain.

Unio gracilis, *Barnes*, Cross lake, Onondaga county; Rev. W. M. Beauchamp.

Unio gracilis, *Barnes*, Erie canal, Rochester; James Delaney.

Unio gracilis, *Barnes*, Erie canal, Monroe county; Rev. John Walton.

Unio gracilis, *Barnes*, Pittsford, Monroe county; Shelley G. Crump.

Unio pressus, *Lea*, Norman's Kill, Albany; C. E. Beecher.

Unio pressus, *Lea*, Mannsville, Jefferson county; T. M. Fry.

Unio pressus, *Lea*, Wellsville, Allegany county; C. E. Beecher.

Unio undulatus, *Barnes*, Pittsford, Monroe county; Shelley G. Crump.

Uuio undulatus, *Barnes*, Erie canal, Monroe county; Rev. John Walton.

Unio undulatus, *Barnes*, Erie canal, Monroe county.

Unio perplexus, *Lea*, Allegany river, near boundary; C. E. Beecher.

Unio verrucosus, *Barnes*, Allegany river, near boundary; C. E. Beecher.

Unio ovatus, *Say*, Allegany river, near boundary; C. E. Beecher.

Unio rubiginosus, *Lea*, Pittsford, Monroe county; Shelley G. Crump.

Unio rubiginosus, *Lea*, Genesee river, Monroe county; Rev. John Walton.

Unio rubiginosus, *Lea*, Erie canal, Onondaga county; Rev. W. M. Beauchamp.

Unio rubiginosus, *Lea*, Erie canal, Rochester.

Unio rubiginosus, *Lea*, Genesee canal, Rochester; Pickett collection.

Unio crassidens, *Lamarck*, Allegany river, near boundary; C. E. Beecher.

Unio clavus, *Lamarck*, Allegany river, near boundary; C. E. Beecher.

Unio patulus, *Lea* = U. clavus, *Lam.*, Allegany river, near boundary; C. E. Beecher.

Unio ellipsis, *Lea*, Niagara river, Niagara Falls; S. M. Luther.

Unio ventricosus, *Barnes*, Seneca river, Onondaga county; C. E. Beecher.

Unio ventricosus, *Barnes*, Seneca river, Onondaga county; Rev. W. M. Beauchamp.

Unio ventricosus, *Barnes*, Tonawanda creek, Niagara county; Dr. S. Hart Wright.

Unio occidens, *Lea*, Tonawanda creek, Niagara county; Dr. S. Hart Wright.

Unio occidens, *Lea*, Pittsford, Monroe county; Shelley G. Crump.

Unio occidens, *Lea*, Seneca river, Onondaga county; Rev. W. M. Beauchamp.

Unio ochraceus, *Say*, Champlain canal, West Troy; C. E. Beecher.

Unio ochraceus, *Say*, Hudson river, Albany; C. E. Beecher.

Unio cariosus, *Say*, Champlain canal, West Troy; C. E. Beecher.

Unio cariosus, *Say*, Hudson river, Albany; C. E. Beecher.

Unio cariosus, *Say*, Norman's Kill, Albany; C. E. Beecher.

Unio multiradiatus, *Lea*, Genesee river, Monroe county; Rev. John Walton.

Unio multiradiatus, *Lea*, Butternut creek, Otsego county.

Unio multiradiatus, *Lea*, Medina, Orleans county; Pickett collection.

Unio multiradiatus, *Lea*, Allegany river, near boundary; C. E. Beecher.

Unio ligamentinus, *Lam.*, Allegany river, near boundary; C. E. Beecher.

Unio luteolus, *Lam.*, New York; Gould collection.

Unio luteolus, *Lam.*, Genesee river, Monroe county; Rev. J. Walton.

Unio luteolus, *Lam.*, Cross lake, Onondaga county; Rev. W. M. Beauchamp.

Unio luteolus, *Lam.*, Ischua creek, Cattaraugus county; C. E. Beecher.

Unio luteolus, *Lam.*, Pittsford, Monroe county; Shelley G. Crump.

Unio luteolus, *Lam.*, Oswego lake; C. E. Beecher.

Unio luteolus, *Lam.*, Onondaga lake, Syracuse; C. E. Beecher.

Unio luteolus, *Lam.*, Genesee river; C. E. Beecher.

Unio rosaceus, *De Kay* = U. luteolus, *Lam.*, Charlotte, Monroe county; Rev. John Walton.

Unio radiatus, *Lam.*, Little lakes, Herkimer county; C. E. Beecher.
Unio radiatus, *Lam.*, Norman's Kill, Albany; C. E. Beecher.
Unio radiatus, *Lam.*, Seneca lake; T. M. Fry.
Unio radiatus, *Lam.*, Schuyler's lake, Otsego county; C. E. Beecher.
Unio radiatus, *Lam.*, Onondaga lake; C. E. Beecher.
Unio radiatus, *Lam.*, Champlain canal, West Troy; C. E. Beecher.
Unio radiatus, *Lam.*, Chenango river; C. E. Beecher.
Unio radiatus, *Lam.*, Tioga river, Steuben county; C. E. Beecher.
Unio radiatus, *Lam.*, Little lakes, Herkimer county; J. G. Anthony.
Unio radiatus, *Lam.*, Hudson river, Albany; C. E. Beecher.
Unio fabalis, *Lea*, Allegany river, near boundary; C. E. Beecher.
Unio parvus, *Barnes*, Syracuse; C. E. Beecher.
Unio parvus, *Barnes*, Erie canal, Onondaga county; Rev. W. M. Beauchamp.
Unio parvus, *Barnes*, Genesec canal, Monroe county; Dr. S. Hart Wright.
Unio complanatus, *Sol.*, Champlain canal, West Troy; C. E. Beecher.
Unio complanatus, *Sol.*, Hudson river, Albany; C. E. Beecher.
Unio complanatus, *Sol.*, Norman's Kill, Albany; C. E. Beecher.
Unio complanatus, *Sol.*, Pittsford, Monroe county; Shelley G. Crump.
Unio complanatus, *Sol.*, Lake Luzerne, Warren county; C. E. Beecher.
Unio complanatus, *Sol.*, Cortland; C. E. Beecher.
Unio complanatus, *Sol.*, Cohocton river, Steuben county; C. E. Beecher.
Unio complanatus, *Sol.*, Greenbush, Rensselaer county; C. E. Beecher.
Unio complanatus, *Sol.*, Mohawk river, Cohoes; C. E. Beecher.
Unio complanatus, *Sol.*, Chepatchet creek, Herkimer county; C. E. Beecher.
Unio complanatus, *Sol.*, Long lake, Hamilton county; C. E. Beecher.
Unio rectus, *Lam.*, Erie canal, Monroe county; Rev. John Walton.
Unio rectus, *Lam.*, Pittsford, Monroe county; Shelley G. Crump.
Unio rectus, *Lam.*, Oneida lake.
Unio rectus, *Lam.*, Seneca river, Onondaga county; Rev. W. M. Beauchamp.
Unio nasutus, *Say*, Hudson river, Albany; C. E. Beecher.
Unio nasutus, *Say*, Pittsford, Monroe county; Shelley G. Crump.
Unio nasutus, *Say*, Champlain canal, West Troy; C. E. Beecher.
Unio nasutus, *Say*, Erie canal, Monroe county; Rev. John Walton.
Unio nasutus, *Say*, Erie canal, Rochester; James Delaney.
Unio Novi-Eboraci, *Lea*, Erie canal, Onondaga county; Rev. W. M. Beauchamp.
Unio Novi-Eboraci, *Lea*, Oswego river.
Unio Novi-Eboraci, *Lea*, Pittsford, Monroe county; Shelley G. Crump.
Unio Novi-Eboraci, *Lea*, Shenandoah creek; C. E. Beecher.
Unio Novi-Eboraci, *Lea*, Cayuga lake; C. E. Beecher.
Unio Novi-Eboraci, *Lea*, Erie canal, Monroe county; Rev. John Walton.
Unio phaseolus, *Hildreth*, Chautauqua lake; C. E. Beecher.
Unio phaseolus, *Hildreth*, Allegany river, near boundary; C. E. Beecher.
Unio gibbosus, *Barnes*, Pittsford, Monroe county; Shelley G. Crump.
Unio gibbosus, *Barnes*, Erie canal, Monroe county; Rev. John Walton.
Unio gibbosus, *Barnes*, Allegany river, near boundary; C. E. Beecher.
Unio gibbosus, *Barnes*, Tonawanda creek, Niagara county; Dr. S. Hart Wright.
Unio Tappanianus, *Lea*, Erie canal, Onondaga county; Rev. W. M. Beauchamp.
Unio Tappanianus, *Lea*, Erie canal, Mohawk; Dr. James Lewis.
Unio Tappanianus, *Lea*, Erie canal, Mohawk; C. E. Beecher.
Unio Tappanianus, *Lea*, Hudson river, Troy; T. H. Aldrich.
Unio Tappanianus, *Lea*, Erie canal, West Troy; T. H. Aldrich.
Unio Tappanianus, *Lea*, Erie canal, Mohawk.

Genus MARGARITANA, *Schumacher*.

Margaritana marginata, *Say*, Mohawk river; C. E. Beecher.
Margaritana marginata, *Say*, Mohawk river, Cohoes; C. E. Beecher.
Margaritana marginata, *Say*, Seneca river; C E. Beecher.
Margaritana marginata, *Say*, Champlain canal, West Troy; C. E. Beecher.
Margaritana marginata, *Say*, Erie canal; C. E. Beecher.
Margaritana marginata, *Say*, New York.
Margaritana marginata, *Say*, Manlius, Onondaga county.
Margaritana rugosa, *Barnes*, Pittsford, Monroe county; Shelley G. Crump.
Margaritana rugosa, *Barnes*, Mohawk river, Cohoes; C. E. Beecher.
Margaritana rugosa, *Barnes*, Hudson river, Albany; C. E. Beecher.
Margaritana rugosa, *Barnes*, Onondaga lake; C. E. Beecher.
Margaritana rugosa, *Barnes*, Cross lake, Onondaga county; Rev. W. M. Beauchamp.

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Margaritana rugosa, *Barnes*, Genesee canal, Olean; C. E. Beecher.

Margaritana rugosa, *Barnes*, Norman's Kill, Albany; C. E. Beecher.

Margaritana undulata, *Say*, Norman's Kill, Albany; C. E. Beecher.

Margaritana undulata, *Say*, Chepatchet creek, Herkimer county; C. E. Beecher.

Margaritana undulata, *Say*, Canisteo river, Steuben county; C. E. Beecher.

Margaritana undulata, *Say*, Herkimer county; C. E. Beecher.

Margaritana undulata, Beaver lake, Herkimer county; C. E. Beecher.

Margaritana undulata, *Say*, Chenango river; C. E. Beecher.

Margaritana undulata, *Say*, Cohocton river, Steuben county; C. E. Beecher.

Margaritana undulata, *Say*, Champlain canal, West Troy; C. E. Beecher.

Margaritana undulata, *Say*, Madison county; C. E. Beecher.

Margaritana deltoidea, *Lea*, Erie canal, Monroe county; Rev. John Walton.

Margaritana deltoidea, *Lea*, Mud creek; James Delaney.

Margaritana margaritifera, *Linn*, Lake Champlain; Gould collection.

Genus ANODONTA, *Cuvier*.

Anodonta fragilis, *Lam.*, Beaver lake, Onondaga county; Rev. W. M. Beauchamp.

Anodonta fragilis, *Lam.*, Beaver lake, Onondaga county; C. E. Beecher.

Anodonta fragilis, *Lam.*, Otsego lake, C. E. Beecher.

Anodonta fragilis, *Lam.*, Cayuga lake.

Anodonta fragilis, *Lam.*, Keuka lake; Dr. S. Hart Wright.

Anondonta Benedictii, *Lea*, Onondaga lake; Rev. W. M. Beauchamp.

Anodonto Benedictii, *Lea*, Erie canal, Rochester; Rev. John Walton.

Anodonta Benedictii, Lake Champlain; Geo. H. Hudson.

Anodonta Benedictii, *Lea*, New York; Emmons collection.

Anodonta Footiana, *Lea*, Canandaigua lake; Pickett collection.

Anodonta edentula, *Say*, Ischua creek, Cattaraugus county; C. E. Beecher.

Anodonta edentula, *Say*, Chautauqua lake; C. E. Beecher.

Anodonta edentula, *Say*, Pittsford, Monroe county; Shelley G. Crump.

Anodonta edentula, *Say*, Seneca river; C. E. Beecher.

Anodonta edentula, *Say*, Genesee river, Monroe county; Rev. John Walton.

Anodonta edentula, *Say*, Erie canal, Monroe county; Rev. John Walton.

Anodonta edentula, *Say*, Honeoye creek, Monroe county; James Delaney.

Anodonta undulata, *Say*, Norman's Kill, Albany; C. E. Beecher.

Anodonta undulata, *Say*, Norman's Kill, Albany.

Anodonta implicata, *Say*, Erie canal, West Troy; C. E. Beecher.

Anodonta implicata, *Say*, Champlain canal, West Troy; C. E. Beecher.

Anodonta fluviatilis, *Dillw.*, Dover Plains, Dutchess county; W. S. Teator.

Anodonta fluviatilis, *Dillw.*, Norman's Kill, Albany; C. E. Beecher.

Anodonta fluviatilis, *Dillw.*, Ischua creek, Cattaraugus county; C. E. Beecher.

Anodonta fluviatilis, *Dillw.*, Buffalo creek, Erie county; C. E. Beecher.

Anodonta fluviatilis, *Dillw.*, Andover, Allegany county; C. E. Beecher.

Anodonta fluviatilis, *Dillw.*, Farnum's pond, Troy; C. E. Beecher.

Anodonta fluviatilis, *Dillw.*, Champlain canal, West Troy; C. E. Beecher.

Anodonta fluviatilis, *Dillw.*, West Mission, Steuben county; C. E. Beecher.

Anodonta fluviatilis, *Dillw.*, Genesee canal, Allegany county; C. E. Beecher.

Anodonta fluviatilis, *Dillw.*, Erie canal, West Troy; C. E. Beecher.

Anodonta fluviatilis, *Dillw.*, Black pond, Albany; C. E. Beecher.

Anodonta fluviatilis, *Dillw.*, Greenbush, Rensselaer county; C. E. Beecher.

Anodonta fluviatilis, *Dillw.*, Mohawk basin, West Troy; C. E. Beecher.

Anodonta Lewisii, *Lea*, Norman's Kill, Albany; C. E. Beecher.

Anodonta Lewisii, *Lea*, Erie canal, Herkimer county; Dr. James Lewis.

Anodonta Lewisii, *Lea*, Erie canal; C. E. Beecher.

Anodonta Lewisii, *Lea*, Pittsford, Monroe county; Shelley C. Crump.

Anodonta lacustris, *Lea*, Canisteo river, Steuben county; C. E. Beecher.

Anodonta lacustris, *Lea*, Cedar lake, Herkimer county; C. E. Beecher.

Anodonta lacustris, *Lea*, Little lakes, Herkimer county; C. E. Beecher.

An. subcylindracea, *Lea*, = A. Ferussaciana, *Lea*, Norman's Kill, Albany; C. E. Beecher.

An. subcylindracea, *Lea*,= A. Ferussaciana, *Lea*, Greenbush, Rensselaer county; C. E. Beecher.

Anodonta Ferussaciana, *Lea*, Pittsford, Monroe county; Shelley G. Crump.

Anodonta subcylindracea, *Lea*, = A. Ferussaciana, *Lea*, Nine-mile creek, Onondaga county; C. E. Beecher.

Anodonta subcylindracea, *Lea*,= A. Ferussaciana, *Lea*, Erie canal; C. E. Beecher.

Anodonta Ferussaciana, *Lea*, Erie canal, Rochester; Rev. John Walton.

Anodonta Ferussaciana, *Lea*, Keuka lake, Yates county; Dr. S. Hart Wright.

Anodonta Ferussaciana, *Lea*, Honeoye creek, Monroe county; James Delaney.

Anodonta Ferussaciana, *Lea*, Erie canal, Syracuse; James Delaney.

Order SIPHONIDA. Family CYRENIDÆ. Genus SPHÆRIUM, *Scopoli*.

Sphærium simile, *Say*, Litchfield, Herkimer county; C. E. Beecher.
Sphærium simile, *Say*, Norman's Kill, Albany; C. E. Beecher.
Sphærium occidentalis, *Prime*, Cedar lake, Herkimer county; C. E. Beecher.
Sphærium striatinum, Norman's Kill, Albany.
Sphærium rhomboideum, *Say*, Greenbush, Rensselaer county; C. E. Beecher.
Sphærium occidentale, *Prime*, Litchfield, Herkimer county; C. E. Beecher.
Sphærium rosoceum, *Prime*, Mohawk river, Herkimer county; Dr. James Lewis.
Sphærium partumeium, *Say*, Astoria, Long Island; Temple Prime.
Sphærium truncatum, *Lins.*, New York; Dr. James Lewis.
Sphærium transversum, *Say*, Norman's Kill, Albany.
Sphærium secure, *Prime*, New York.

Genus PISIDIUM, *Pfeiffer*.

Pisidium æquilaterale, *Prime*, Cedarville, Herkimer county; C. E. Beecher.
Pisidium ventricosum, *Prime*, New York; Dr. James Lewis.
Pisidium abditum, *Prime*, Long Island; Temple Prime.
Pisidium Virginicum, *Bourg.*, Hudson river, Albany; C. E. Beecher.
Pisidium compressum, *Prime*, New York; Dr. James Lewis.
Pisidium compressum, *Prime*, Mohawk river; C. E. Beecher.
Pisidium ferrugineum, *Prime*, New York; Dr. James Lewis.

## II. FRESH-WATER UNIVALVES.

Class GASTEROPODA. Order PECTINIBRANCHIATA. Family STREPOMATIDÆ. Genus GONIOBASIS, *Lea*.

Goniobasis Virginica, *Gmel.*, Hudson river, Albany; C. E. Beecher.
Goniobasis, Virginica, *Gmel.* (immature), Norman's Kill, Albany; C. E. Beecher.
Goniobasis Virginica, *Gmel.*, var. multilineata, *Say*, Hudson river, Albany; C. E. Beecher.
Goniobasis Virginica, *Gmel.*, Erie canal, Monroe county; Rev. John Walton.
Goniobasis depygis, *Say*, Baldwinsville, Onondaga county; Rev. W. M. Beauchamp.
Goniobasis livescens, *Menke*, Erie canal.
Goniobasis livescens, *Menke*, Erie canal, West Troy; T. H. Aldrich.
Goniobasis livescens, *Menke*, Mohawk river, Cohoes; C. E. Beecher.

Genus PLEUROCERA, *Rafinesque*.

Pleurocera subulare, *Lea*, Erie canal.
Pleurocera subulare, *Lea*, Mohawk river; T. H. Aldrich.
Pleurocera subulare, *Lea*, Monroe county; Rev. John Walton.
Pleurocera subulare, *Lea*, Lake Ontario, Monroe county; Rev. John Walton.

Genus ANCULOSA, *Say*.

Anculosa carinata, *Brug.*, Susquehanna river.
Anculosa carinata, *Brug.*, Chemung river; C. E. Beecher.
Anculosa carinata, *Brug.*, Cortland; C. E. Beecher.

Family RISSOIDÆ. Genus BYTHINIA, *Gray*.

Bythinia tentaculata, *Linn*, Erie canal, West Troy; C. E. Beecher.

Genus BYTHINELLA, *Moquin-Tandon*.

Bythinella obtusa, *Lea*, Mohawk river, Mohawk; Dr. James Lewis.
Bythinella obtusa, *Lea*, Onondaga county; Rev. W. M. Beauchamp.

Genus GILLIA, *Stimson*.

Gillia altilis, *Lea*, Hudson river, Albany county; C. E. Beecher.

Genus SOMATOGYRUS, *Gill*.

Somatogyrus subglobosus, *Say*, Erie canal, Mohawk; T. H. Aldrich.

Genus AMNICOLA, *Gould and Haldeman*.

Amnicola Sayana, *Anth.*, Ontario county; J. M. Clarke.
Amnicola porata, *Say*, Mohawk river, Cohoes; C. E. Beecher.
Amnicola porata, *Say*, Norman's Kill, Albany; C. E. Beecher.
Amnicola pallida, *Hald.*, Mohawk river, Mohawk; C. E. Beecher.
Amnicola pallida, *Anth.*, Norman's Kill, Albany; C. E. Beecher.
Amnicola pallida, *Anth.*, Greenbush, Rensselaer county; C. E. Beecher.
Amnicola Cincinnatiensis, *Anth.*, Erie canal, Mohawk; T. H. Aldrich.
Amnicola limosa, *Say*, Erie canal, Mohawk; Dr. James Lewis.

Genus POMATIOPSIS, *Tryon.*

Pomatiopsis lapidaria, *Say*, Greenbush, Rensselaer county; C. E. Beecher.

Pomatiopsis lustrica, *Say*, Norman's Kill, Albany; C. E. Beecher.

Pomatiopsis lustrica, *Say*, Erie canal, Mohawk; Dr. James Lewis.

Family VALVATIDÆ. Genus VALVATA, *Muller.*

Valvata sincera, *Say*, Winfield; Herkimer county; Albert Bailey.

Valvata tricarinata, *Say*, var. simplex, Little lakes, Herkimer county; C. E. Beecher.

Valvata tricarinata, *Say*, Schuyler's lake, Otsego county; C. E. Beecher.

Valvata tricarinata, *Say*, Hudson river, Albany; C. E. Beecher.

"Valvata arenifera," *Lea*, larva case of the insect Phrygania, Oneida river, Onondaga county; Rev. W. M. Beauchamp.

Family VIVIPARIDÆ. Genus VIVIPARA, *Lamarck.*

Vivipara contectoides,* *W. G. Binn.*, Erie canal; C. E. Beecher.

Vivipara contectoides, *W. G. Binn.*, (embryos), Erie canal, Albany; W. B. Marshall.

Vivipara contectoides, *W. G. Binn.*, Erie canal, Mohawk; Dr. James Lewis.

Genus MELANTHO, *Bowditch,*

Melantho rufa, *Hald.*,= M. decisa, *Say*, Norman's Kill, Albany; C. E. Beecher.

Melantho rufa, *Hald.*,= , *Say*, Erie canal; C. E. Beecher.

Melantho rufa, *Hald.*,= M. decisa, *Say*, Erie canal, Mohawk; C. E. Beecher.

Melantho integra, *Say*,= M. decisa, *Say*, Champlain canal, West Troy; C. E. Beecher.

Melantho integra, *Say*,= M. decisa, *Say*, Erie canal, Mohawk; C. E. Beecher.

Melantho integra, *Say*,= M. decisa, *Say*, Erie canal, Herkimer county; Dr. James Lewis.

Melantho decisa, *Say*, Schuyler's lake, Otsego county; C. E. Beecher.

Genus LIOPLAX, *Troschel.*

Lioplax subcarinata, *Say*, Norman's Kill, Albany; C. E. Beecher.

Order PULMONATA. Suborder LIMNOPHILA. Family AURICULIDÆ. Genus ALEXIA, *Gray.*

Alexia myosotis, *Drap.*, New York.

Alexia myosotis, *Drap.*, Huntington, L. I.; Temple Prime.

Genus CARYCHIUM, *Muller.*

Carychium exiguum, *Mull.*, Litchfield, Herkimer county; C. E. Beecher.

Genus MELAMPUS, *Montfort.*

Melampus bidentatus, *Say*, Grassmere, Staten Island; A. H. Gardner.

Melampus bidentatus, *Say*, Coney Island; T. H. Aldrich.

Family LIMNÆIDÆ. Subfamily LIMNÆINÆ. Genus LIMNÆA, *Lamarck.*

Limnæa stagnalis, *Linn.*, Leroy, Geuesee county; C. E. Beecher.

Limnæa stagnalis, *Linn.*, Pittsford, Monroe county; Shelley G. Crump.

Limnæa stagnalis, *Linn.*, Erie canal, Rochester.

Subgenus BULIMNEA, *Haldeman.*

Limnæa megasoma, *Hald.*, Lake Champlain; George H. Hudson.

Subgenus RADIX, *Montfort.*

Limnæa columella, *Say*, Fort Hamilton, Long Island; A. H. Gardner.

Limnæa columella, *Say*, New York.

Limnæa columella, *Say*, Seneca river; C. E. Beecher.

Limnæa columella, *Say*, Little lakes, Herkimer county; C. E. Beecher.

Subgenus LIMNOPHYSA, *Fitz.*

Limnæa reflexa, *Say*, Lake Erie; C. E. Beecher.

Limnæa reflexa, *Say*, Erie canal, Rochester; Rev. John Walton.

Limnæa reflexa, *Say*, Pittsford, Monroe county; Shelley G. Crump.

Limnæa elodes, *Say*, Jefferson county; Rev. John Walton.

Limnæa elodes, *Say*, Rochester; C. E. Beecher.

Limnæa elodes, *Say*, New York.

Limnæa elodes, *Say*, Suspension Bridge, Niagara county; C. E. Beecher.

Limnæa desidiosa. *Say*, Litchfield, Herkimer county, C. E. Beecher.

Limnæa desidiosa, *Say*, Albany; C. E. Beecher.

Limnæa (Sp ?), Pittsford, Monroe county; Shelley G. Crump.

Limnæa catascopium, *Say*, Mohawk river; T. H. Aldrich.

Limnæa catascopium, *Say*, Hudson river, Albany; C. E. Beecher.

Limnæa catascopium, *Say*, Norman's Kill, Albany; C. E. Beecher.

Limnæa catascopium, *Say* (amplified variety), Erie canal: Dr. James Lewis.

Limnæa catascopium, *Say*, Pittsford, Monroe county; Shelley G. Crump.

* Colonized in Erie canal in 1868 by Dr. James Lewis.

Limnæa pallida, *Adams*, Cross lake, Onondaga county; Rev. W. M. Beauchamp.
Limnæa pallida, *Adams*, Pittsford, Monroe county; Shelley G. Crump.
Limnæa emarginata, *Say*, Oswego; Rev. W. M. Beauchamp.
Limnæa caperata, *Say*, Litchfield, Herkimer county; C. E. Beecher.
Limnæa humilis, *Say*, Litchfield, Herkimer county; C. E. Beecher.
Limnæa humilis, *Say*, Winfield, Herkimer county; Albert Bailey.

Subgenus ACELLA, *Haldeman*.

Limnæa gracilis, *Say*. Buffalo; Buffalo Society Natural Sciences.

Genus PHYSA, *Draparnaud*.

Physa gyrina, *Say*, Erie canal, Monroe county; Rev. John Walton.
Physa gyrina, *Say*, Baldwinsville, Onondaga county; Rev. W. M. Beauchamp.
Physa ancillaria, *Say*, Greenbush, Rensselaer county; C. E. Beecher.
Physa heterostropha, *Say*, New York.
Physa heterostropha, *Say*, Pittsford, Monroe county; Shelley G. Crump.
Physa heterostropha, *Say*, Litchfield, Herkimer county; C. E. Beecher.
Physa heterostropha, *Say*, Glen Cove, Long Island; A. H. Gardner.
Physa heterostropha, *Say*, New Dorp, Staten Island; A. H. Gardner.
Physa integer, *Hald.*, Little lakes, Herkimer county; C. E. Beecher.
Physa integer, *Hald.*, Erie canal; C. E. Beecher.

Genus BULINUS, *Adanson*.

Bulinus hypnorum, *Linn.*, West Albany; C. E. Beecher.
Bulinus hypnorum, *Linn.*, Pittsford, Monroe county; Shelley G. Crump.
Bulinus hypnorum, *Linn.*, Winfield, Herkimer county; Albert Bailey.

Subfamily PLANORBINÆ. Genus PLANORBIS, *Guettard*. Subgenus PLANORBELLA, *Haldeman*.

Planorbis campanulatus, Cedar lake, Herkimer county; C. E. Beecher.
Planorbis campanulatus, *Say*, Pittsford, Monroe county; Shelley G. Crump.

Subgenus HELISOMA, *Swainson*.

Planorbis trivolvis, *Say*, Norman's Kill, Albany; C. E. Beecher.
Planorbis trivolvis, *Say*, Cortland; C. E. Beecher.
Planorbis trivolvis, *Say*, Greenbush, Rensselaer county; C. E. Beecher.
Planorbis trivolvis, *Say*, Onondaga lake; C. E. Beecher.
Planorbis bicarinatus, *Say*, Cedar lake, Herkimer county; C. E. Beecher.
Planorbis bicarinatus, *Say*, Albany; C. E. Beecher.
Planorbis bicarinatus, *Say*, Greenbush, Rensselaer county; C. E. Beecher.

Subgenus MENETUS, *H. and A. Adams*.

Planorbis exacutus, *Say*, Litchfield, Herkimer county; C. E. Beecher.
Planorbis exacutus, *Say*, Cedar lake, Herkimer county; C. E. Beecher.

Subgenus GYRAULUS, *Agassiz*.

Planorbis deflectus, *Say*, Greenbush, Rensselaer county; C. E. Beecher.
Planorbis deflectus, *Say*, Erie canal, Monroe county; Rev. John Walton.
Planorbis hirsutus, *Gould*, Little lakes, Herkimer county; C. E. Beecher.
Planorbis hirsutus, *Gould*, Seneca river; Rev. John Walton.
Planorbis parvus, *Say*, Norman's Kill, Albany; C. E. Beecher.
Planorbis parvus, *Say*, Mohawk river, Cohoes; C. E. Beecher.

Genus SEGMENTINA, *Fleming*.

Segmentina armigera, *Say*, Pittsford, Monroe county; Shelley G. Crump.
Segmentina armigera, *Say*, Sand Lake.

Subfamily ANCYLINÆ. Genus ANCYLUS, *Geoffroy*.

Ancylus fuscus, *Adams*, Norman's Kill, Albany; C. E. Beecher.
Ancylus parallelus, *Hald.*, Little lakes, Herkimer county; Dr. James Lewis.
Ancylus parallelus, *Hald.*, Norman's Kill, Albany; C. E. Beecher.
Ancylus tardus, *Say*, Mohawk river, Mohawk; Dr. James Lewis.
Ancylus rivularis, *Say*, Ontario county; J. M. Clarke.

Genus GUNDLACHIA, *Pfeiffer*.

Gundlachia Meekiana, *Stimp.*, Canandaigua, Ontario county; J. M. Clarke.

## III. LAND SHELLS.

Suborder GEOPHILA. Family SELENITIDÆ. Genus MACROCYCLIS, *Beck*.

Macrocyclis concava, *Say*, Pittsford, Monroe county; Rev. John Walton.
Macrocyclis concava, *Say*, New York; Dr. James Lewis.
Macrocyclis concava, *Say*, Winfield, Herkimer county; Albert Bailey.
Macrocyclis concava, Litchfield, Herkimer county; C. E. Beecher.
Macrocyclis concava, *Say*, Pittsford, Monroe county; Shelley G. Crump.

FORESTRY BUILDING (Construction Period)

Family LIMACIDÆ. Genus LIMAX, *Linnæus.*

Limax maximus, *Linn.* Introduced from Europe.
Limax flavus, *Linn.* Introduced from Europe.
Limax campestris, *Binn.*
Limax agrestis, *Linn.* Introduced from Europe.

Genus ZONITES, *Montfort.* Subgenus MESOMPHIX, *Rafinesque.*

Zonites fuliginosus, *Griff.*, Rochester; James Delaney.
Zonites fuliginosus, *Griff.*, Winfield, Herkimer county; Albert Bailey.
Zonites fuliginosus, *Griff.*, Pittsford, Monroe county; Shelley G. Crump.
Zonites fuliginosis, *Griff.*, Litchfield, Herkimer county; C. E. Beecher.
Zonites inornatus, *Say*, Pittsford, Monroe county; Shelley G. Crump.
Zonites inornatus, *Say*, Litchfield, Herkimer county; C. E. Beecher.
Zonites ligerus, *Say*, Litchfield, Herkimer county; C. E. Beecher.
Zonites intertextus, *Binn.*, Ontario county; J. M. Clarke.
Zonites intertextus, *Binn.*, Litchfield, Herkimer county; C. E. Beecher.
Zonites intertextus, *Binn.*, Pittsford, Monroe county; Shelley G. Crump.

Subgenus HYALINIA, *Agassiz.*

Zonites cellarius, *Mull.*, Astoria, Long Island; Temple Prime.
Zonites nitidus, *Mull.*, Ilion, Herkimer county; C. E. Beecher.
Zonites arboreus, *Say*, Pittsford, Monroe county; Rev. John Walton.
Zonites arboreus, *Say*, Greenbush, Rensselaer county; C. E. Beecher.
Zonites arboreus, *Say*, Troy; T. H. Aldrich.
Zonites viridulus, *Menke.*, Silver lake, S. I.; A. H. Gardner.
Zonites viridulus, *Menke.*, Pittsford, Monroe county; Rev. John Walton.
Zonites viridulus, *Menke.*, Troy; T. H. Aldrich.
Zonites indentatus, *Say*, New Dorp, S. I.; A. H. Gardner.
Zonites indentatus, *Say*, Genesee county; Rev. John Walton.
Zonites indentatus, *Say*, Litchfield, Herkimer county; C. E. Beecher.
Zonites indentatus, *Say*, Huntington; Temple Prime.
Zonites minusculus, *Binn.*, Fort Hamilton, L. I.; A. H. Gardner.
Zonites Binneyanus, *Morse*, Huntington, L. I.; Temple Prime.
Zonites ferreus, *Morse*, Litchfield, Herkimer county; C. E. Beecher.
Zonites exiguus, *Stimp.*, Monroe county, Rev. John Walton.
Zonites, exiguus, *Stimp.*, Litchfield, Herkimer county; C. E. Beecher.

Subgenus CONULUS, *Moquin-Tandon.*

Zonites fulvus, *Drap.*, Litchfield, Herkimer county; C. E. Beecher.

Subgenus GASTRODONTA, *Albers.*

Zonites internus, *Say*, Albany; T. H. Aldrich.
Zonites multidentatus, *Binn.*, Baldwinsville, Onondaga county; C. E. Beecher.
Zonites multidentatus, *Binn.*, Litchfield, Herkimer county; C. E. Beecher.

Genus VITRINA, *Draparnaud.*

Vitrina limpida, *Gould*, Litchfield, Herkimer county; C. E. Beecher.
Vitrina limpida, *Gould*, Litchfield, Herkimer county; Dr. James Lewis.
Vitrina limpida, *Gould*, Winfield, Herkimer county; Albert Bailey.

Family PHILOMYCIDÆ. Genus TEBENNOPHORUS, *Binney.*

Tebennophorus Carolinensis, *Bose.*
Tebennophorus dorsalis, *Binn.*

Family HELICIDÆ. Genus HELIX, *Linnæus.* Section PATULA, *Haldeman.*

Patula alternata, *Say*, Albany; C. E. Beecher.
Patula alternata, *Say*, Pittsford, Monroe county; Rev. John Walton.
Patula alternata, *Say*, Litchfield, Herkimer county; C. E. Beecher.
Patula perspectiva, *Say*, Pittsford, Monroe county; Shelley G. Crump.
Patula perspectiva, *Say*, Litchfield, Herkimer county; C. E. Beecher.
Patula perspectiva, *Say*, Winfield, Herkimer county; Albert Bailey.
Patula striatella, *Anth.*, Pittsford, Monroe county; Rev. John Walton.
Patula striatella, *Anth.*, Greenbush, Rensselaer county; C. E. Beecher.
Patula striatella, *Anth.*, Pittsford, Monroe county; Shelley G. Crump.
Patula striatella, *Anth.*, Winfield, Herkimer county; Albert Bailey.

Section MICROPHYSA, *Albers.*

Microphysa pygmæa, *Drap.*, Litchfield, Herkimer county; C. E. Beecher.

Section HELICODISCUS, *Morse.*

Helicodiscus lineatus, *Say*, Pittsford, Monroe county; Rev. John Walton.
Helicodiscus lineatus, *Say*, Litchfield, Herkimer county; C. E. Beecher.

Section STROBILA, *Morse.*

Strobila labyrinthica, *Say*, Staten Island; E. W. Hubbard.

Section STENOTREMA, *Rafinesque.*

Stenotrema hirsutum, *Say*, Pittsford, Monroe county; Shelley G. Crump.

Stenotrema hirsutum, *Say*, Pittsford, Monroe county.

Stenotrema monodon, *Rack.*, Albany; C. E. Beecher.

Stenotrema monodon, *Rack.*, Pittsford, Monroe county; Shelley G. Crump.

Section VALLONIA, *Risso.*

Vallonia pulchella, *Mull.*, Pittsford, Monroe county; Rev. John Walton.

Vallonia pulchella, *Mull.*, Litchfield, Herkimer county; C. E. Beecher.

Vallonia pulchella, *Mull.*, Ontario county; J. M. Clarke.

Section TRIODOPSIS, *Rafinesque.*

Triodopsis palliata, *Say*, Pittsford, Monroe county; Rev. John Walton.

Triodopsis palliata, *Say*, Pittsford, Monroe county; Shelley G. Crump.

Triodopsis palliata, *Say*, Winfield, Herkimer county; Albert Bailey.

Triodopsis palliata, *Say*, Annandale, Dutchess county; W. S. Teator.

Triodopsis appressa, *Say*, Dr. James Lewis.

Triodopsis appressa, *Say*, Albany; T. H. Aldrich.

Triodopsis inflecta, *Say*, Albany; T. H. Aldrich.

Triodopsis fallax, *Say*, Ohio; C. E. Beecher.

Triodopsis fallax, *Say*, Pittsford, Monroe county; Shelley G. Crump.

Triodopsis tridentata, *Say*, High Bridge, New York city; A. H. Gardner.

Triodopsis tridentata, *Say*, New York.

Triodopsis tridentata, *Say*, Pittsford, Monroe county; Shelley G. Crump.

Triodopsis tridentata, *Say*, Litchfield, Herkimer county; C. E. Beecher.

Section MESODON, *Rafinesque.*

Mesodon albolabris, *Say*, Annandale, Dutchess county; W. S. Teator.

Mesodon albolabris, *Say*, Albany; C. E. Beecher.

Mesodon albolabris, *Say*, Cedarville, Herkimer county; C. E. Beecher.

Mesodon albolabris, *Say*, Herkimer county; Dr. James Lewis.

Mesodon albolabris, *Say*, Winfield, Herkimer county; Albert Bailey.

Mesodon albolabris, *Say*, Litchfield, Herkimer county; C. E. Beecher.

Mesodon albolabris, *Say*, Pittsford, Monroe county; Shelley G. Crump.

Mesodon Mitchellianus, *Lea*, Litchfield, Herkimer county;* Albert Bailey.

Mesodon elevatus, *Say*, Litchfield, Herkimer county;* Albert Bailey.

Mesodon exoletus, *Binn.*, Litchfield, Herkimer county; Albert Bailey.

Mesodon dentiferus, *Binn.*, West Winfield, Herkimer county; C. E. Beecher.

Mesodon dentiferus, *Binn.*, Litchfield, Herkimer county; Albert Bailey.

Mesodon multilineatus, *Say*, Ann Arbor, Mich.; C. E. Beecher.

Mesodon profundus, *Say*, Litchfield, Herkimer county;* Albert Bailey.

Mesodon thyroides, *Say*, Rochester; Rev. John Walton.

Mesodon thyroides, *Say*, Pittsford, Monroe county; Shelley G. Crump.

Mesodon thyroides, *Say*, Pittsford, Monroe county.

Mesodon thyroides, *Say*, Elizaville, Columbia county; W. S. Teator.

Mesodon bucculenta, *Gould.* = M. thyroides, *Say*, Long Island; T. H. Aldrich.

Mesodon thyroides, *Say*, Annandale, Dutchess county; W. S. Teator.

Mesodon Sayii, *Binn.*, Mohawk, Herkimer county; C. E. Beecher.

Mesodon Sayii, *Binn.*, Albany; C. E. Beecher.

Mesodon Sayii, *Binn.*, Monroe county; Shelley G. Crump.

Mesodon Sayii, *Binn.*, Winfield, Herkimer county; Albert Bailey.

Mesodon Sayii, *Binn.*, Herkimer county; Dr. James Lewis.

Family PUPIDÆ. Genus PUPA, *Draparnaud.* Subgenus PUPILLA, *Leach.*

Pupa muscorum, *Linn.*, Crown Point, Essex county; Gould collection.

Pupa muscorum, *Linn.*, Auburn, Cayuga county; Gould collection.

Pupa muscorum, *Linn.*, Rochester; Rev. W. M. Beauchamp.

Pupa muscorum, *Linn.*, Rochester; James Delaney.

Pupa pentodon, *Say*, Jefferson county; T. M. Fry.

Pupa pentodon, *Say*, Long Island; Temple Prime.

Subgenus LEUCOCHILA, *Alb. and Mart.*

Pupa armifera, *Say*, Meadowdale, Albany county; W. B. Marshall.

Pupa armifera, *Say*, Yates county; T. M. Fry.

Pupa contracta, *Say*, Litchfield, Herkimer county; C. E. Beecher.

Pupa fallax, *Say*, Cold Spring; Temple Prime.

Pupa fallax, *Say*, Clarksville, Albany county; C. E. Beecher.

* Colonized in Herkimer county.

Pupa curvidens, *Gould*, Meadowdale, Albany county; W. B. Marshall.

Pupa contracta, *Say*, Fort Hamilton, L. I.; A. H. Gardner.

Pupa corticaria, *Say*, Albany; C. E. Beecher.

Pupa corticaria, *Say*, Meadowdale, Albany county; W. B. Marshall.

Pupa corticaria, *Say*, Ontario county; J. M. Clarke.

Pupa rupicola, *Say;* Gould collection.

Genus VERTIGO, *Müller*. Subgenus ISTHMIA, *Gray*.

Vertigo Gouldii, *Binn.*, Albany; C. E. Beecher.

Vertigo simplex, *Gould*, Ontario county; J. M. Clarke.

Vertigo Bollesiana, *Morse*, Meadowdale, Albany county; W. B. Marshall.

Vertigo milium, *Gould*, Long Island; Temple Prime.

Vertigo ovata, *Say*, Litchfield, Herkimer county; C. E. Beecher.

Vertigo pygmæa, *Drap.*, Fort Hamilton, Long Island; A. H. Gardner.

Family STENOGYRIDÆ. Genus FERUSSACIA, *Risso*.

Ferussacia subcylindrica, *Linn.*, Rochester; Rev. John Walton.

Ferussacia subcylindrica, *Linn.*, Fort Wadsworth, S. I.; A. H. Gardner.

Ferussacia subcylindrica, *Linn.*, Litchfield, Herkimer county; C. E. Beecher.

Family SUCCINIDÆ. Genus SUCCINEA, *Draparnaud*.

Succinea ovalis, *Gould*, Litchfield, Herkimer county; C. E. Beecher.

Succinea ovalis, *Gould*, Albany; C. E. Beecher.

Succinea ovalis, *Gould*, Pittsford, Monroe county; Shelley G. Crump.

Succinea obliqua, *Say*, Annandale, Dutchess county; W. S. Teator.

Succinea obliqua, *Say*, Mohawk, Herkimer county; C. E. Beecher.

Succinea obliqua, *Say*, Albany; C. E. Beecher.

Succinea obliqua, *Say*, Frankfort, Herkimer county; C. E. Beecher.

Succinea obliqua, *Say*, Upper Red Hook, Dutchess county; W. S. Teator.

Succinea obliqua, *Say*, Pittsford, Monroe county; Shelley G. Crump.

Succinea obliqua, *Say*, Winfield, Herkimer county; Albert Bailey.

Succinea obliqua, *Say*, Pittsford, Monroe county; Rev. John Walton.

Succinea avara, *Say*, Albany; C. E. Beecher.

Succinea avara, *Say*, Fort Washington, New York city; W. S. Teator.

# REPORT ON THE FORESTRY EXHIBIT.

By ROMEYN B. HOUGH, Lowville, Superintendent.

The New York State Exhibit occupied in the Forestry Building a space of about 1,566 square feet, mainly on the eastern side and near the southern end of the building. The exhibit was collected and arranged so as to be of the highest educational value, and to be fully illustrative of the forest resources of the State. It was unique in several particulars of scientific importance. It consisted of (1) a series of photographs about ten by sixteen inches in size, of typical isolated trees in leaf; (2) a series of photographs of the same trees after the leaves had fallen; (3) natural size photographs of typical barks of trees; (4) sections of the woods showing transverse, radial and tangential views of the grain, so thin as to be translucent and hence revealing characteristic structures; (5) preserved specimens of the leaves, flowers and fruits, artificial reproductions being substituted for perishable fruits.

The photographs and specimens, so far as they pertain to a given species, were mounted together in a double frame between glass, and fully labeled with technical, English, German, French and Spanish names. The frames were, themselves, an exhibit of New York woods, highly finished, as they were designed and made especially for this purpose. They were mounted on pivoted posts which turned easily and thereby facilitated a study of the exhibit by displaying the thin wood sections in either transmitted or reflected light. The greater part of the space assigned to the State for its forestry exhibit was occupied by these posts, each displaying four species. Besides these, however, the exhibit contained a series of log specimens, each about three and one-half feet long, and displaying the bark and transverse, radial and tangential views of the grain. The cut surfaces represented the woods both unfinished and highly finished, the latter suggesting an ornamental value of many of our timbers not appreciated by the public generally. The labels with these timbers gave information as to their respective distribution and relative abundance throughout the State and the uses to which they are generally applied.

Arranged as transparencies in the windows was a series of transverse sections of the woods of the State one-four-hundredth of an inch in thickness, the products of a machine and process devised by the superintendent of the exhibit for the scientific study and display of woods. The exhibit also included several manufactured articles of wood, in pursuance of the general design of making it as complete a showing as possible of the various native and naturalized trees of the State.

One hundred and six species were represented, and, from a dendrological standpoint this was, perhaps, as complete an exhibit as was ever made of the forestry of any region whatever. The walls of the space were covered with balsam boughs, making the atmosphere redolent with

WHITE ELM (*Ulmus Americana*)

the perfumes of the Adirondacks, a balsam pillow being displayed as a product of that region.

A fine picture of a group of Sweet-gum trees grown on New York soil and interesting from association, was hung upon the wall and bore the following label: "Alexander Hamilton brought the thirteen trees to New York in 1802 from Mount Vernon, Va., tied under his gig and planted them himself, where they now stand, near the upper end of Manhattan Island, on the place known as the Hamilton Grange."

As properly being a portion of New York's contribution to the forestry display of the exposition, though isolated from the rest of the exhibit, was a fine log specimen of the White Pine (*Pinus Strobus*) placed in the group which formed the central feature in the Forestry Building, and also nine of the trunks which entered into the construction of the imposing colonnade of the building. The latter were located on the west front, and counting from the southwest corner were as follows, commencing with the tenth cluster of three each: Beech, Sugar Maple and Balsam; eleventh, Hemlock, White Ash and Black Cherry; twelfth, White Birch, White Spruce and Yellow Birch.

# CATALOGUE OF NEW YORK EXHIBITS IN DEPARTMENT N, FORESTRY AND FOREST PRODUCTS.

## LIST OF WOODS REPRESENTED IN THE NEW YORK FORESTRY EXHIBIT,

WITH NOTES ON THE DISTRIBUTION AND RELATIVE ABUNDANCE OF EACH THROUGHOUT THE STATE AND THE USES FOR WHICH THEY ARE MOST SUITABLE.

Sweet Bay, *Magnolia glauca, L.*— Found on Long Island and Staten Island in swamps, but hardly more than a shrub in this climate. Of little use excepting for ornamental purposes and its delightfully fragrant flowers.

Cucumber Tree, *Magnolia acuminata, L.*— Common in the southwestern counties. Used in cabinet making, for pump logs, woodenware, cheese boards, etc.

Whitewood, Tulip Tree, *Liriodendron Tulipifera, L.*— More or less common south of the center of the State. Valuable lumber, woodenware, etc.

Papaw, *Asimina triloba, Dunal.*— Very local, in western New York on the lake watershed. Of little use, but fruit occasionally eaten.

Basswood, *Tilia Americana, L.*— Abundant throughout the State. Lumber, cabinet making, woodenware, excelsior, etc.

Hop Tree, Wafer Ash, *Ptelea trifoliata, L.*— Not uncommon as a shrub or small tree along the Niagara river and occasional (though probably escaped) on Long and Staten Islands. Of little use excepting for ornamental purposes and a bitter extract of the bark and fruit occasionally as a domestic medicine and a substitute for hops.

Holly, *Ilex opaca, Ait.*— Common in swamps on Long Island and Staten Island, as a shrub and occasionally as a tree. Wood valuable for turnery, choice cabinet work, etc., and foliage for decorative purposes.

Ailanthus, *Ailanthus glandulosus, Desf.* — Introduced from the Orient, but now thoroughly naturalized and growing luxuriantly in localities in Southern New York. Little used, though originally introduced as an ornamental tree.

Horse Chestnut, *Aesculus Hippocastanum, L.*— Common as an ornamental tree south of the center of the State. Little used except for ornament.

Summer Grape, *Vitis aestivalis, Michx.* — Common and occasionally attaining eight or ten inches in diameter of trunk. Fruit of pleasant flavor, but little used.

Sugar Maple, *Acer saccharinum, Wang.* — Abundant generally throughout the State, especially in the north. One of our most important trees, producing wood of high ornamental value for interior finishing, furniture, woodenware, etc., and sugar produced by the tree is an important product of the State.

Striped Maple, Moosewood, *Acer Pennsylvanicum, L.*— Common throughout the State along shaded ravines. A small tree of little use.

Red Maple, Soft Maple, *Acer rubrum, L.*— Abundant throughout the State in moist soil along streams, swamps, etc. Woodenware, cabinet making, etc., and occasionally for interior finishing and sometimes for sugar making.

White Maple, Soft Maple, *Acer dasycarpum, Ehrh.*— Common along streams, especially river banks subject to inundation. Woodenware, cabinet making, etc., and some maple sugar.

Box Elder, Ash-leaved Maple, *Negundo aceroides, Moench.*— Rare and local in the southwestern portion of the State, in river valleys. Woodenware and occasionally for interior finishing. Some sugar is produced by this tree.

Stag-horn Sumach, *Rhus typhina, L.*— Common throughout the State, and occasionally attaining the dimensions of a tree, the one represented in the exhibit being one foot in diameter, about the maximum size. Wood highly ornamental and used occasionally in fancy woodwork. Fruit, bark, etc., used occasionally for dyeing purposes.

Dwarf Sumach, *Rhus copalina, L.*— Abundant as shrub or very small tree in the southeastern portion of the State. Leaves and bark are used in dycing and to some extent in tanniug.

Poison Sumach, *Rhus venenata, D C.*— Occasional throughout the State in swamps, where it makes its presence known by its virulence. Not used.

Coffee Tree, *Gymnocladus dioicus, Koch.* — Rare. Found occasionally in the lake region of Western New York. Occasionally used in turnery and the leaves in the manufacture of fly poison. Formerly the seeds were used as a substitute for coffee.

Locust, *Robinia Pseudacacia, L.* — Abundant throughout the State about homesteads as an ornamental tree, and now thoroughly naturalized. Valuable for posts and in turnery.

Honey Locust, *Gleditschia triacanthos, L.*— Common as a naturalized tree throughout the State. Valuable for fence posts and construction purposes where a hard, strong wood is required.

Wild Red Cherry, *Prunus Pennsylvanicum, L.*— Common as a tree generally too small for economic purposes. Little used. The acid fruit and bitter bark are occasionally used in domestic medicine.

Sour Cherry, *Prunus Cerasus, L.*— Common in cultivation and occasionally escaped so as to entitle it to rank as a naturalized species. Produces valuable fruit.

Black Cherry, *Prunus serotina, Ehrh.*— Common throughout the State. One of our most valuable trees for furniture, interior finishing, etc. Bark possesses tonic properties.

Canada Plum, *Prunus nigra, Ait.*— Common in the northern and western portions of the State. Valuable only on account of its fruit and the wood occasionally used in turnery.

Oxheart Cherry, *Prunus Avium, L.*— Very abundant as a naturalized tree, especially in the southern portion of the State. Fruit highly valued and timber of excellent quality.

Apple, *Pyrus Malus, L.*— Common as an escape from cultivation. Wood valuable in turnery. The fruit of the wild trees is generally of quite inferior quality.

Sweet-scented Crab, *Pyrus coronaria, L.*— Common in Western New York, where it is well known on account of its delightfully fragrant flowers. Fruit very sour and unpalatable. Little used; sometimes used for tool handles, etc.

Pear, *Pyrus communis, L.*— Occasionally naturalized and bearing a very inferior fruit. Little used outside of cultivation.

Mountain Ash, *Pyrus sambucifolia. C. and S.*— Occasionally found in northern and elevated regions and commonly transplanted for ornamental purposes. Of little use except for ornament.

Scarlet Thorn, *Crataegus coccinea, L.*— An abundant species distributed throughout the State generally. Little used.

White Thorn, *Crataegus punctata, Jacq.* — Abundant in sections. Not often used.

Cock-spur Thorn, *Crataegus Crus-galli, L.*— Not uncommon generally. Not often used.

Hawthorn, *Crataegus Oxycantha, L.*— Originally introduced from Europe, for hedges and ornamental purposes, and now common in localities as a naturalized species. Of little use excepting for hedges.

Shad-bush, American Lancewood, *Amelanchier Canadensis, Torr and Gray.*— Not uncommon throughout the State as a shrub but rare as a medium-size tree. Wood occasionally used for tool handles, fishing rods, etc.

Sweet Gum, Bilsted, *Liquidambar Styraciflua, L.*— Common on Long and Staten Islands. Used for lumber and building purposes, cabinet work, etc.

Hercules Club, *Aralia spinosa, L.*— Probably originally introduced as an ornamental species, but occasionally found persisting in the soil after the original trees have disappeared. Of no use excepting for ornamental purposes.

Nanny-berry, *Viburnum Lentago, L.*— Common generally throughout the State in swampy soil, excepting near the seaboard. Little used, the heartwood having a characteristic and to most nostrils a very disagreeable odor. Fruit sometimes eaten.

Black Haw, *Viburnum prunifolium, L.* — Common as a small tree or shrub in favorable localities, hillsides, on Staten Island, etc. Not used.

Flowering Dogwood, *Cornus florida, L.*— Common throughout the State excepting in the northern districts, growing along the sides of ravines where it is very conspicuous in springtime while in bloom. Wood occasionally used in turnery and for wheel hubs.

Alternate-leaved Dogwood, *Cornus alternifolia, L. f.*— Common in moist, rich woods, generally as a shrub, but occasionally, especially in the north, developing into a tree from six to ten or twelve inches in diameter. One photographed for the exhibit was of the last-mentioned size. Wood of very smooth and close grain, but not found in commercial quantities.

Tupelo, Sour Gum, Pepperidge, *Nyssa sylvatica, Marsh.*— Not uncommon generally throughout the State excepting in Northern New York where it rarely occurs. A useful timber for wheel hubs, woodenware, pump logs, ox-yokes, etc.

Persimmon, *Diospyros Virginiana, L.*— Occasionally on Long and Staten Islands. Wood used in turnery and for small woodenware. Medicinal properties of an astringent nature are found in the bark and fruit. Fruit edible after the action of frosts.

White Ash, *Fraxinus Americana, L.*— Common throughout the State in dry,

rich soil. Extensively used for agricultural implements, oars, etc., and for lumber.

Black Ash, *Fraxinus sambucifolia, Lam.*— Abundant in swamps generally throughout the State. Used for interior finishing, cabinet making, barrel hoops, basketware, etc. Burls are occasionally found on this tree (a fine one being shown in the exhibit), which are very valuable cut into veneering for ornamental wood work

Green Ash, *Fraxinus viridis, Michx. f.* — A small tree found commonly in moist bottom-lands. Confounded with the white ash in commerce and used for the same purposes.

Red Ash, *Fraxinus pubescens, Lam.*— Common throughout the State along the borders of streams and moist bottom lands. Used for agricultural implements and for lumber, for interior finishing, etc.

Catalpa, *Catalpa bignoniodes, Walt.*— Common as an ornamental tree in southern sections of the State and now in places naturalized. Little used except for ornamental purposes, though a valuable timber in the south for fence posts, etc.

Sassafras, *Sassafras officinale, Nees.*— Common throughout the State excepting in the northern counties, usually as a shrubby undergrowth in rich woods, but occasionally as small and medium size trees; large southwestward. A useful wood in cooperage, and an extract from the bark is used as a flavoring and in medicine as an aromatic stimulant.

American Elm, White Elm, *Ulmus Americana, L.*— Abundant generally; a majestic tree. Valuable for tool handles, agricultural implements and in cooperage.

Red Elm, Slippery Elm, *Ulmus fulva, Mich.*— Not uncommon throughout the State along hillsides, etc. Used for railway ties, sills, fencing, boat ribs, etc., and of late to some extent for interior finishing.

Cork Elm, Rock Elm, *Ulmus racemosa. Thomas.*— Common in Northern New York, but becoming scarce southward. Very valuable for agricultural implements, tool handles, wheel stocks, etc.

Nettle Tree, Hackberry, *Celtis occidentalis, L.*— Uncommon generally. Found in rich, moist soils, along river bottoms, and generally looked upon as a stranger wherever found. Some trees have quite a local reputation in that way. Two fine individuals especially famous are the "Unknown Tree," close by the New York Central railroad track near Spraker's Station, and a very large tree of its kind, fourteen feet in girth, near Schuylerville, reputed to be "older than the Christian era," though no one is prepared to vouch for its age. It stands near the spot where General Burgoyne surrendered, and, doubtless, was quite a large tree then.

Butternut, *Juglans cinerea, L.*— Common generally throughout the State. Used for interior finishing, cabinet work, etc., and the delicious nuts are often seen in market.

Black Walnut, *Juglans nigra, L.*— Formerly abundant in the southern and western counties. A very valuable lumber for interior finishing, furniture, etc., and nuts highly prized by some.

Sycamore, Button Ball, *Platanus occidentalis, L.*— Common generally excepting in northern counties, growing especially along water-courses. Within the past few years this wood has become very popular, cut "quartering," as an ornamental wood for interior finishing, furniture, etc. It has long been used for fruit boxes, baskets, etc.

Red Mulberry, *Morus rubra, L.*— A rather uncommon tree of Southern and Western New York, growing in rich bottom lands. Used in cooperage, for handles, etc., and produces an edible fruit, though not of much commercial value.

Moker-nut Hickory, *Carya tomentosa, Nutt.*— Abundant in Southeastern New York. Used in the manufacture of agricultural implements, tool handles, etc., and produces a valuable fruit.

Pig-nut Hickory, *Carya porcina, Nutt.* — Common throughout the State. Valuable in the manufacture of agricultural implements, tool handles, etc.

Shell-bark Hickory, *Carya alba, Nutt.* — Abundant generally in the interior of the State. Useful for tool handles, agricultural implements, wheel stocks, etc., and for its superior nuts, perhaps the most valuable of the hickories.

King-nut Hickory, *Carya sulcatta, Nutt.*— A western tree reaching its eastern limit of distribution in Western New York. Rare within our limits. Not distinguished from the shell-bark in commerce or in uses, but produces a much larger nut.

Small-fruited Hickory, *Carya microcarpa, Nutt.*— Not uncommon throughout the State. Used for agricultural implements, tool handles, etc.

Bitter-nut Hickory, *Carya amara, Nutt.*— Common throughout the State. Usually along the borders of streams and in moist lowlands. Used in the manufacture of agricultural implements, tool handles, hoops, etc.

Yellow Oak, *Quercus tinctoria, Bartram.* — Not uncommon throughout the State generally. Used for furniture, interior finishing, in cooperage, etc. Bark rich in tannin.

Red Oak, *Quercus rubra, L.*— Abundant throughout the State. Used in cooperage, for furniture, interior finishing, etc.

WHITE ELM (*Ulmus Americana*)

Chestnut Oak, Rock Oak, *Quercus Prinus, L.*— Common throughout the State. Used for railway ties, fencing and furniture. Valuable on account of the amount of tannin contained in the bark.

Scarlet Oak, *Quercus coccinea, Wang.*— Common throughout the State. Used in cooperage, for railway ties, etc.

Black-Jack Oak, *Quercus nigra, L.*— A small tree abundant in localities along the coast. Little used except for fuel.

Chinquapin Oak, *Quercus Muhlenburgii, Engelm.*— Western New York and rather uncommon. A timber valuable for much the same uses as that of the white oak.

Pin Oak, *Quercus palustris, Du Roi.*— Abundant on Long and Staten Islands. Used in cooperage, for furniture, interior finishing, etc.

White Oak, *Quercus alba, L.*— Common throughout the State. One of the most valuable of the oaks for interior finishing, furniture, agricultural implements, cooperage, etc.

Burr Oak, *Quercus macrocarpa, Michx.*— Common in river valleys, especially in the northern portion of the State. Valuable for the same uses as the white oak and scarcely inferior to it.

Post Oak, *Quercus obtusiloba, Du Roi.*— Common on Long and Staten Islands. Used for railway ties, fuel and to some extent in the manufacture of chairs and in cooperage.

Swamp White Oak, *Quercus bicolor, Willd.*— Common generally throughout the State in moist situations. Used in the manufacture of agricultural implements, furniture, etc.

Chestnut, *Castanea vesca*, var. *Amer. Michx.*— Common throughout the State excepting in the more northern and elevated regions. Besides the valuable fruit this tree produces excellent lumber for general construction purposes, furniture, fencing, etc., and railway ties, withstanding decay for a long time.

Beech, *Fagus ferruginea, Ait.*— Very common, especially in the northern and elevated regions, growing in dry, rich soil. Largely used in the manufacture of plane stocks, chairs, tool handles, etc., etc., and for fuel.

Hop Hornbeam, Ironwood, *Ostrya Virginica, Willd.*— Common throughout the State in dry soil. Used for levers, tool handles, etc.

Blue Beech, Ironwood, *Carpinus Caroliniana, Walter.*— Common throughout the State along streams. Useful for tool handles, levers, etc.

Sweet Birch, *Betula lenta, L.*— Common throughout the State. Valuable in the manufacture of furniture, woodenware, for interior finishing and for fuel.

Yellow Birch, *Betula lutea, Michx. f.* — Common in the northern and more elevated districts on rich uplands and hillsides. Used in the manufacture of woodenware and furniture, for interior finishing and extensively for fuel.

River Birch, *Betula nigra, L* — Rare in New York, being found sparingly on Staten Island and Long Island, in moist soil along streams, and Prof. Charles H. Peck reports a few individuals on the bank of the Hudson river, near Coxsackie. Applicable to the same uses as the yellow birch.

White Birch, Old-field Birch, *Betula populifolia, Marshall.*— Abundant in localities throughout the State in dry and often poor soil. Extensively used for spools, shoe pegs, woodenware, etc., and for fuel.

Canoe Birch, *Betula papyracea, Ait.*— Abundant in Northern and occasionally in Western New York. Used for interior finishing, furniture, woodenware, spools, shoe pegs, etc., and for fuel.

Peach Willow, *Salix amygdaloides, Anders.*— Common in Western New York, in moist soil along streams and lakeshores. Used for charcoal.

Yellow Willow, *Salix alba*, var. *vitellina.*— A fine large willow, originally introduced, but now so abundant as to form a conspicuous feature among our trees, and entitle it to a place in the exhibit. Very commonly set along the banks of streams, railway embankments, etc., to prevent erosion. Useful too as an ornamental tree and in the production of charcoal. Its tough fibre would suggest its value for paper pulp.

Black Willow, *Salix nigra, Marshall.*— A small tree abundant throughout the State, along the borders of streams and marshes. Useful for the production of charcoal. The bark of this species, and of all the willows in general, possesses astringent and feebly tonic principles, and a decoction is sometimes used in domestic practice as a febrifuge.

Balm-of-Gilead, Balsam Poplar, *Populus balsamifera, L.*— Occasional though not common, excepting in cultivation as a formerly popular ornamental tree. Little used. A viscous exudation of the buds of this species is sometimes used in medicine.

Quaking Asp, *Populus tremuloides, Michx.*— Common throughout the State, springing up abundantly in soil denuded of other forests. Used in the manufacture of small woodenware, excelsior, etc., and largely for paper pulp.

Swamp Poplar, *Populus heterophylea, L.* — The most uncommon of our poplars, the only known stations in the State being swamps on Staten and Long Islands. Little used, though the handsome, bluish-

gray heartwood would suggest a peculiar value in ornamental woodwork.

Large-toothed Poplar, *Populus grandidentata, Michx.*— Abundant, especially in dry sandy soil and on hillsides in the northern portion of the State. A valuable timber for paper pulp, small woodenware, etc.

Cottonwood, *Populus monilifera, Ait.*— Common in Central and Western New York, in moist, rich soil, attaining sometimes very large size. The "Century Tree," of Geneva, N. Y., is of this species, and is a splendid one of its kind, being nearly 100 feet in height, 116 feet in spread of branches, and having a straight columnar trunk over six feet in diameter. It seems to be in perfect health throughout, and is one of the most interesting individual trees in the State. Used in the manufacture of paper pulp, and, to some extent, for light lumber, woodenware, etc.

Lombardy Poplar, *Populus dilatata, Ait.*— An old-time ornamental tree, evidently very popular in the past, as it often marks the location of old country residences. Found along lakeshores, occasionally coming up naturally from pieces of limbs deposited there by the waves. The tree never produces seed in this country. Little used, excepting as an ornamental tree.

Coast White Cedar, *Chamaecyparis thyoides, L.*— Abundant in swamps on Long Island, the "Cedar Swamps" along the coast being so named on account of this tree of which they are sometimes densely composed. Used extensively in the manufacture of pails, buckets, skiffs, etc., where lightness is a desired quality, and for fence posts, telegraph poles, railway ties, shingles, etc.

Arbor-vitæ, White Cedar, *Thuya occidentalis, L.*— Abundant in Northern New York in moist, rich soil, many of the Adirondack lakes being more or less skirted by these trees. Very useful for fence posts, telegraph poles, railway ties, etc., the timber being quite durable in contact with the soil, and for skiff building, etc.

Red Cedar, *Juniperus Virginiana, L.*— Common throughout the State, excepting in elevated regions in the northern portion, growing with us on dry, gravelly hillsides, A very valuable timber for fence posts, withstanding decay for perhaps a longer period than any other of our native timbers. It is used too in cabinet making and particularly for chests for clothes and furs, as its odor seems to be obnoxious to insects.

Red or Norway Pine, *Pinus resinosa, Ait.*— Central and Western and Northern New York, but rather uncommon. Used for sills, piles, spars and lumber for general construction.

White Pine, *Pinus Strobus, L.*— Formerly abundant in rich, moist soil, especially in the central, northern and western portions of the State. A noble tree of greatest economic importance for the manufacture of doors, sash, blinds, for interior finishing and for general construction purposes.

Pitch Pine, *Pinus rigida, Miller.*—Common throughout the State. Used for sills, piles, fuel and occasionally for lumber.

Jersey Pine, *Pinus inops, Ait.*— Staten Island and thence southward. A tree of small or medium size and when large enough applicable to the same uses as the pitch pine.

Yellow Pine, *Pinus mitis, Michx.*— A southern tree reaching its northern limit of distribution on Staten Island, where it occurs sparingly. Applied to the same uses as the pitch and Jersey pines, not being distinguished from them commercially.

Northern Gray Pine, *Pinus Banksiana, Lamb.*— The rarest of the New York pines, being found only in a few localities among or near the high peaks of the Adirondacks and sparingly among the islands of the St. Lawrence, Its range is thence northwestward to the Arctic regions. Used for railway ties, fuel, etc.

Hemlock, *Tsuga Canadensis, Carr.* — Common generally and especially abundant in Northern New York. Very valuable in the production of coarse lumber for general construction purposes, and occasionally for interior finishing, while the bark is used very extensively for tanning leather.

Black Spruce, *Picea nigra, Link.*— Occasionally in Western New York and abundant in the elevated northern sections A valuable lumber for flooring, coping and general construction purposes, and where straight-grained and cut "quartering" largely manufactured into the sounding boards of musical instruments. It is exensively used too for paper pulp and the spruce gum of commerce is a product of this tree mainly.

White Spruce, *Picea alba, Link.*— A handsome tree, found occasionally in the elevated regions of Northeastern New York. It is not there as abundant as the black spruce, but the lumbermen of the region confound the two, calling them both the white spruce. Lumber valuable for the same uses as is that of the black spruce.

Balsam, *Abies balsamea, Marshall.*— Common in Northern New York and occasional in the central and western sections in cold swamps. Little used until of late it has been found to possess very superior qualities for sounding boards of musical instruments, for which

it is now somewhat employed. The fragrant boughs of this tree are used for filling pillows and preserve their fragrance for a very long period.

Tamarack, Larch, *Larix Americana, Michx.*— Abundant in cold swamps in the northern and elevated districts — more scarce southward. Valuable for railway ties, fence posts, telegraph poles and for the knees of vessels.

## INDIVIDUAL EXHIBITS.

Hough, R. B., Lowville; "American Woods;" preparations of woods for the stereopticon and microscope and wooden cards.

Jesup, Morris K., New York; collection of native woods.

Vanderbilt, Geo. W., New York; working plans of forests, with maps, photographs and products.

# THE AWARDS SYSTEM.

The system of awards adopted at the Columbian Exposition was a development of the "American system," so called from its fundamental idea of non-competitive exhibits being first put into use at the Centennial Exposition of 1876.

The act of Congress, approved April 25, 1890, gave to the World's Columbian Commission jurisdiction over the appointment of judges and examiners and the awarding of all premiums. A joint commission was appointed, consisting of Messrs. A. T. Britton, B. B. Smalley, W. F. King and John Boyd Thacher, of the World's Columbian Commission, and Messrs. J. W. Ellsworth, Benjamin Butterworth, C. H. McCormick and E. T. Jeffrey, of the World's Columbian Exposition, to report on the subject of awards. Before reaching their decision, the committee carefully considered the views of the directors-general of the Philadelphia and Paris Expositions and of several recognized authorities on the subject in this country. All substantially concurred in recommendations which were embodied in the following extract from the report of the joint committee to the Columbian Commission:

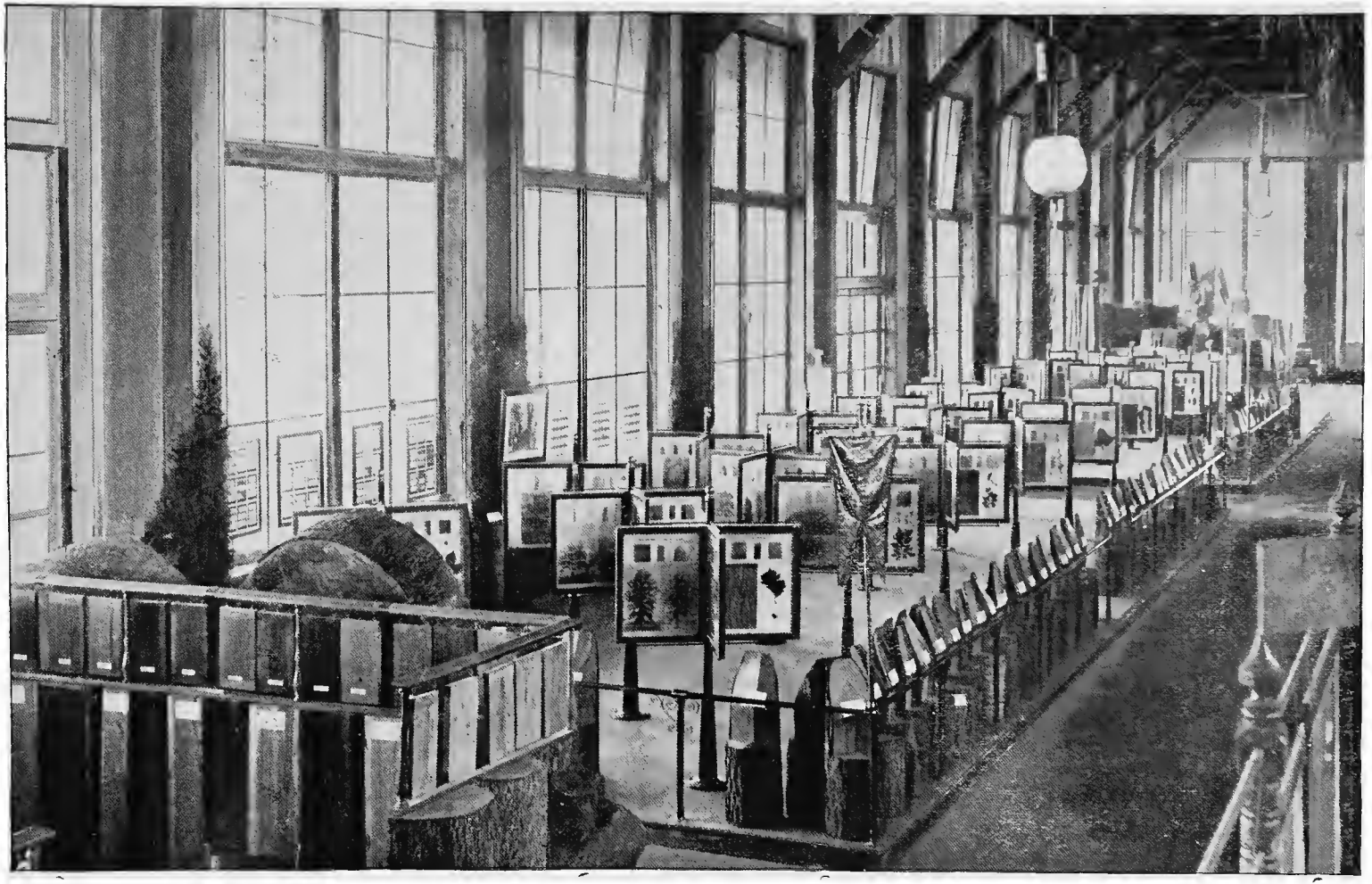
*First.* "The committee are unanimous in reporting that awards should not be competitive. This exposition was designed to show the development of the resources of the United States and the progress of civilization in the New World in comparison with all nations who might wish to participate. It was thought that it should be put in its results upon a higher plane than simply to indicate the relative merits of the competitive exhibits of Smith and Brown. It was believed that it should indicate some independent and essential excellence in the article exhibited, and that it should record some advancement in the state of the art represented by such exhibit.

"To that end the committee recommend that awards shall be granted upon specific points of excellence or advancement, formulated in words by a board of judges or examiners, who shall be competent experts, and the evidence of these awards shall be parchment certificates, accompanied by bronze medals."

*Second.* "The awards of these boards of judges or examiners will thus constitute an enduring and historical record of development and progress as represented by the exhibits in question; the parchment certificates will, by sufficient terms of identification, evidence the award, and the bronze medal will serve to the exhibitor as an enduring memento of his success. Those exhibits which in the opinion of the juries and examiners do not possess sufficient excellence or intrinsic development to warrant awards will simply be scheduled in the general catalogue of the exposition."

*Third.* "It is recommended that there should be but one class or kind of medal and that they should be made of bronze."

The report of the joint committee was adopted by the commission November 24, 1890, and on the 3d of August, 1892, Congress approved



FORESTRY EXHIBIT, North Section

the plan and granted $103,000 for bronze medals and diplomas, to be furnished under the sole authority of the Secretary of the Treasury. It is worthy of note that the Columbian Commission had absolutely no relationship to the preparation of the medals and diplomas. Both are made under the supervision of the Secretary of the Treasury, and by him delivered to the Columbian Commission, to be awarded to exhibitors in accordance with the findings of the judges and juries appointed by it. The medals were designed by Augustus St. Gaudens, and the diplomas by Will H. Low.

Money awards, graded awards and competitive awards were carefully excluded by the plan adopted by the commission and Congress. A standard of excellence was established in each class or group of exhibits, and the merits of the exhibits were measured by that standard, and not by comparison with each other. Tersely put, an exhibit had merit enough to warrant an award or it had not. If it had, the examining judge noted the specific points of excellence in the exhibit and reported to the jury of his department. If his report was sustained by the jury the award was granted. If not sustained by a majority vote the award was defeated. In cases of controversy additional examinations of the exhibit were made by judges appointed, or by the jury as a whole.

This system of awards was adopted November 24, 1890, and on January 14, 1891, the President of the United States issued his invitations to the foreign nations to participate, but it was not until March 3, 1893, that Congress made the necessary appropriation to enable the committee on awards to proceed with its labors. An organization was at once effected, and the necessary regulations framed and published. Under these regulations the thirteen departments of the fair were each provided with an expert jury, varying in numbers according to the magnitude of the several departments. These juries were authorized and required to control their own organization, having their respective officers of their own selection, and making the necessary subordinate arrangements to give executive effect to their organization. Out of their number from day to day individual examiners were instructed to investigate and report upon assigned exhibits, such examiner being selected for his supposed qualifications and especial fitness as an expert, in connection with the class of exhibits to be examined, and each being required to submit to his departmental jury a written report, wherein he would state the various features of his examination and the special points of excellence upon which he recommended the allowance of an award in each instance. The departmental jury meeting as a whole and making further examinations through such committees as they might find it necessary to appoint amongst themselves, but resulting finally in the aggregate judgment of the whole committee, would thereafter carefully examine these written reports, and if dissatisfied with their correctness or sufficiency, or otherwise, would secure the appointment of other examiners, either one or more, and would have such further report or series of reports submitted to them as they might deem sufficient for their information. When finally satisfied that they had all the facts before them which, in their judgment, were necessary

for the making of an award, the jury would act as a whole and determine the question of award by a majority vote. From that decision there was no appeal upon the merits of the judgment, but if any exhibitor complained that injustice had been done to his exhibit by reason of fraud, or irregularities, or clerical mistakes, it was competent for him to appeal to the Executive Committee on Awards, who were thereupon required to appoint an independent court of appeals to hear and determine the justice of his complaint.

The executive committee sought to obtain, both at home and abroad, the best men in each class of exhibits who were not only upright and competent, but were generally recognized by the world to possess both qualifications. At the request of the committee the foreign nations submitted lists of judges to be appointed upon their behalf, and nearly all were highly distinguished for their learning and position in their several countries. A similar tribute can be paid to the American judges. While in a general body of judges there might be occasionally appointments of questionable strength, it was impossible for an incompetent judge to perform duty for any continuous period without developing that fact. The necessity for his submitting written reports to his departmental jury would necessarily disclose his deficiencies and compel the discontinuance of his services. In the aggregate there were 852 judges appointed. Of that number not to exceed six cases of incompetency were developed amongst the judges appointed, and only one case of doubtful integrity.

New York State furnished fifty of the total number of judges, distributed through the various departments as follows:

LIST OF JUDGES FROM THE STATE OF NEW YORK, AND THE DEPARTMENTS AND GROUPS IN WHICH THEY SERVED.

| Name. | Department. | Group. |
|---|---|---|
| Atwater, R. M. | Manufactures | 94 and 95. |
| Benjamin, Marcus | Manufactures and liberal arts | 87, 148. |
| Bicknell, J. Y. | Live stock | 34. |
| Blackall, R. C. | Transportation | |
| Breneman, A. A. | Agriculture | 10. |
| Brown, J. G. | Fine arts | 140, 141, 142 and 144. |
| Carpenter, R. C. | Machinery and transportation | 69. |
| Chandler C. F. | Manufactures | 87. |
| Chase, Wm. M. | Fine arts | 140, 141, 142 and 144. |
| Coe, R. E. | Live stock | 31. |
| Colne, Charles | Manufactures | 90, 94, 95 and 96. |
| Conger, Mrs. C. de Cossé | Fine arts | 140, 141, 142 and 144. |
| Davis, John P. | Fine arts | 143. |
| Dielman, Frederick | Fine arts | 143. |

| Name. | Department. | Group. |
|---|---|---|
| Drevenstedt, J. H | Live stock | 34. |
| Fiske, Willard | Ethnology | |
| French, D. C | Fine arts | 139. |
| Freud, Mrs. Hannah | Manufactures | 104. |
| Gargan, H. L | Manufactures | 100. |
| Gifford, R. Swain | Fine arts | 140, 141, 142 and 144. |
| Hawley, F. W | Live stock | |
| Hodgson, John H | Agriculture | 7. |
| Lafarge, John | Manufactures and fine arts | 90, 140, 141, 142, 144. |
| Laureau, L. G | Manufactures | 90, 93, 118. |
| Lyon, Edmond R | Manufactures | 105. |
| McClelland, Eugene | Manufactures | 98. |
| McMurtrie, Wm | Agriculture | 9. |
| Markham, Wm. G | Live stock | 29. |
| Maynard, Geo. W | Fine arts | 140, 141. |
| Millet, Frank D | Fine arts, liberal arts, manufactures | |
| Nicoll, J. C | Fine arts | 142, 144. |
| Paine, Chas. M | Transportation | 80, 81, 82, 84. |
| Patterson, Andrew | Manufactures | 104. |
| Peer, Geo. E | Live stock | 34. |
| Peerlee, Geo. H | Agriculture | 7. |
| Roberts, I. P | Live stock | |
| Ryan, Harris J | Electricity | 137, 138. |
| Smith, Joseph Colcord | Manufactures | 88, 90. |
| Steck, George | Liberal arts | 158. |
| Strickland, John W. A | Manufactures | |
| Sweet, John E | Agriculture and machinery | 7, 16, 69, 79. |
| Thurston, R. H | Agriculture and transportation | 7, 16, 83. |
| Ward, Mrs. Catherine Barnes | Liberal arts | 149, 151. |
| Warner, Olin L | Fine arts | 139. |
| Wheeler, Mrs. Candace | Manufactures | 90, 96, 100. |
| Williams, Alexander S | Forestry | 19. |
| Williams, Robert D | Manufactures | 98. |
| Wolff, Alfred R | Transportation | 84. |
| Young, Calvin | Agriculture | 16. |
| Zimmer, F. B | Live stock | 34. |

The apprehension that the system of awards adopted would result in so large a number of diplomas as to cheapen their value, seems to have been groundless. Actual experience proved that the obligations imposed upon each individual examiner to report his conclusions in writing and over his own signature, to become a matter of permanent and public record, and the high standard of excellence with which the comparison of exhibits was made, resulted in such an amount of care,

caution and exactness, as to materially reduce the usual percentage of awards. Exclusive of France and Norway, who withdrew from examination, and the various individuals who also withdrew their exhibits from examination, there were in the Chicago Exposition 65,422 individual exhibitors, and the judges made awards to 21,000 individual exhibitors. This percentage is far below that of any other international fair, as is shown by the following table:

| | Exhibitors. | Medals. | Per cent. |
|---|---|---|---|
| 1873, Vienna | 42,000 | 26,000 | 62 |
| 1876, Philadelphia | 31,000 | 13,104 | 42 |
| 1888, Melbourne | 9,000 | 6,000 | 66 |
| 1889, Paris | 61,722 | 33,889 | 55 |
| 1893, Chicago | 65,422 | 23,757 | 36 |

Of course the number of exhibitors is not the measure of the number of exhibits, because an individual exhibitor might have several exhibits in the same or different department, group or class. In fact, and as illustrative of the labor performed by the juries of awards, over 250,000 separate exhibits were examined and reported upon, out of which accrued the ultimate total of 23,757 medals awarded.

The system worked expeditiously, and the number of dissatisfied exhibitors was remarkably small. In the Paris Exposition of 1889, there were more than 800 appeals filed from the awards of the juries, 670 of which were allowed, and different awards made upon the judgment of the appellate court. In the Chicago Exposition, out of 65,422 exhibitors, only 259 complaints were submitted in any form against the awards, and out of that number only forty-three cases ripened into actual appeals. Of these appeals all have been adjusted excepting five, wherein the decision of the court of appeal has not yet been announced.

All the awards, with the exception of the cases on appeal, were announced from time to time on the bulletin boards of their respective departments. It was intended, and preparations to that end had been perfected, to have a formal and ceremonial announcement of awards in Music Hall, of the World's Fair grounds, on the thirtieth of October, the closing day of the fair, but the concurrent action of all the World's Fair authorities in suspending public ceremonies in closing the fair, because of the assassination of the mayor of Chicago, compelled the awards committee to rest upon their prior and more informal announcements.

The members of the Executive Committee on Awards are: John Boyd Thacher, New York, chairman; A. T. Britton, District of Columbia; A. B. Andrews, North Carolina; W. J. Sewell, New Jersey; B. B. Smalley, Vermont.

## NEW YORK AWARDS.

The uniformly high merit of the New York exhibits which were found in nearly every group of the exposition classification, is fully attested by the great number of awards granted our exhibitors. Of the 23,757 awards, New York received 1,873 diplomas and 1,757 medals, not including 182 premiums in the live stock exhibit, or about one-twelfth

FORESTRY EXHIBIT, South Section

of the whole number. This number is so far in advance of every other State as to render comparison useless, and equals in number the awards granted the German empire.

Concerning New York's prominence, the following letter is in evidence:

"WORLD'S COLUMBIAN COMMISSION,
WASHINGTON, *Mar.* 29, 1894.

"Hon. JOHN FOLEY,

"*Chief Executive Officer New York State Board, World's Columbian Exposition:*

"DEAR SIR.— After some unavoidable delay, I have great pleasure in forwarding to you the accompanying certified list of the awards granted to exhibitors from the State of New York at the World's Columbian Exposition.

"In view of the facts that New York was represented in each and all of the departments, that in the more important departments she was foremost in the extent of her representation, and that the awards are so numerous as to demonstrate the high character of the exhibits offered, the list finally delivered can hardly fail to prove very satisfactory to both the commission and the general public.

"I have the honor to remain, with great respect,

"Your obedient servant,

"JOHN BOYD THACHER,

"*Chairman Executive Committee on Awards.*

"Per JOHN W. HOYT,

"*Representative of the Committee.*"

It will be noticed that the number of diplomas exceeds somewhat the number of medals. This is owing to a ruling of the executive committee on awards that no exhibitor could receive more than one medal in each group, or more than one diploma in each class in which he exhibited. As large firms like Tiffany & Co., in the manufactures department, and Henry R. Worthington, in the machinery department, often had exhibits in three or four classes under one group, the difference in number between the medals and diplomas is readily apparent.

In department C, live stock, cash premiums were given to partially defray the cost of transportation, care and subsistence of the animals exhibited. As before stated, New York received 182 premiums, aggregating $5,620, a sum in excess of the total cost of the exhibit.

The following table shows the number of diplomas and medals in each department granted to New York exhibitors:

| Department. | | Diplomas. | Medals. |
|---|---|---|---|
| A.— Agriculture | 288 | | |
| Dairy | 295 | | |
| | | 583 | 583 |
| B.— Horticulture, Viticulture | 26 | | |
| Pomology | 26 | | |
| Floriculture | 40 | | |
| | | 92 | 88 |

| Department. | Diplomas. | Medals. |
|---|---|---|
| C.— Live stock, 57 first premiums, 43 second premiums, 45 third premiums, 37 fourth premiums | 19 | 15 |
| D.— Fish, fisheries | 16 | 16 |
| E.— Mines and mining | 90 | 74 |
| F.— Machinery | 88 | 87 |
| G.— Transportation | 73 | 73 |
| H.— Manufactures | 351 | 308 |
| J.— Electricity | 56 | 46 |
| K.— Fine arts* | 84 | 84 |
| L.— Liberal arts | 400 | 362 |
| M.— Ethnology | 17 | 17 |
| N.— Forestry | 4 | 4 |
| | 1,873 | 1,757 |

*The 84 diplomas specifically mention 540 works of art.

# AWARDS GRANTED NEW YORK STATE EXHIBITS IN DEPARTMENT A, AGRICULTURE.

GROUP 1.—CEREALS, GRASSES.

Aldrich, Charles H., Mattituck; corn.
Aldridge, A. G., Victor; rye.
Andrews, William, Bristol; barley.
Ansley, Frank, Billsborough; corn.
Archer, W. G., Clifton Springs; corn.
Batchelor, Daniel, Utica; timothy and collection of grasses.
Bates, George, Cambria; corn.
Beaver, Harry, Lyndonville; wheat.
Bellinger, J. G., Herkimer; wheat.
Black, W. F., Billsborough; corn.
Bonnell, H. S., Waterloo; beans, Japanese buckwheat.
Bowen, H. S., Newport; corn.
Briglyn, Ed., Orleans; corn.
Brumaghim, A., Fonda; broom corn.
Buchan, W. S., Hopewell Centre; corn.
Burch, J., Medina; barley.
Callman, John, Hopewell Centre; corn.
Case, S. W., Orleans; corn.
Chapman, P. B., Chapinsville; wheat.
Clark, V. W., W. Bethany; barley.
Clark, W. P., Waddington; corn.
Conklin, E. W., & Son, Binghamton; clover and timothy seed.
Cook, H. C., Dundee; wheat.
Coolidge, Charles, Phelps; corn, rye.
Coon, U. G., Medina; wheat, barley.
Cumming, Arthur, Cuylerville; corn, buckwheat.
Cummings, Peter, Schoharie; corn.
Dankleberger, M. C., E. Varick; clover seed.
Danolds, A. A., Medina; barley.
Davison, G. H., Millbrook; corn.
Davison, John I., Lockport; clover seed.
Decker, G. W., Monticello; corn.
Didama, J. E., Medina; barley, wheat.
Donald, A., Horseheads; collection of grasses.
Eastman, C. F., Woodville; corn.
Ferguson, E., Orleans; corn.
Fisher, Albert, Ithaca; corn.
Fisher, George, Hendy Creek; rye.
Fox, William, Clifton Springs; corn, clover, wheat.
Gray, James H., Lima; wheat.
Gregory, Chas. P., Geneva; barley.
Grinnell, A. D., E. Shelby; barley.
Ham, Henry, Lyndonville; wheat.
Hamilton, William, Caledonia; wheat.
Harte, George, Spencerport; corn.
Hasbroack, Hiram, Lloyd; rye.
Henderson, Peter, & Co., New York; barley, buckwheat, grass, timothy, clover seed, corn, wheat and collective exhibit of grasses.
Hibbard, C. M., Sprout Brook; corn, wheat, beans.
Hill, Ed. S., Peruville; Japanese wheat.
Hocroff, R. M., Hopewell; corn.
Holland, James, Seneca Castle; corn.
Hopkins, F. B., Bath; corn.
Horning, A., Phelps; wheat.
Howarth, Edward, Lockport; clover seed.
Howarth, Richard, E. Varick; clover seed.
Howell, S. D., Millville; barley, wheat.
Howette, David, Varick; clover seed.
Howland, John, Gloversville; corn.
Isham, W. B., New York; rye.
Jolly, Isaac, W. Fayette; corn.
Jones, John W., Elmira; rye.
King, T. H., Trumansburg; corn.
Kingsford, Thomas, & Son, Oswego; barley.
Knapp, A. N., Seneca Castle; corn.
Laub, D. A., Waterloo; corn.
Leach, A. T., Lyons; barley.
Lee, R. M., S. Bloomfield; corn.
Link, W. H., Reeds Corners; corn.
Longwell, Carver, Bradford; corn.
Lowman, F. C., Nichols; corn.
McCann, John, Elmira; corn.
McGrain, D., McDougals; corn.
Mackey, D. D., Highland; corn.
McVean, J. J., Johnstown; rye.
McVean, J. J., Johnstown; corn.
Marsh, David, Cuylerville; corn.
Maynard, Mrs. O. E., Waterloo; corn.
Miller, James, Penn Yan; wheat.
Morgan, George, Easton; corn.
Muiser, Richard, Suffern; rye.
Murdock, Fred., Medina; barley.
Murphy, Arthur, Seneca Castle; corn.
Nellis, John W., Palatine Bridge; rye.
Newcomb, A. J., Flint; corn.
Newman, Wm. O., Ithaca; corn.
Newton, John, Hopewell Centre; collection of corn.
Nichols, Peter F., Lewis; rye.
Nichols, Scott, Adamsville; rye.
Nuteaway, Robert, Schoharie; rye.
Ontario County Exhibit; corn.
Orleans County Exhibit; wheat.
Oxner, J. S., New Haven; corn.
Paine, John, Greece; wheat, beans.
Pease, W. B., Lockport; corn.
Pelton, P. R., Monticello; rye.
Pierson, M. F., Seneca Castle; corn, beans.

Preston, E., Pittsford; buckwheat, beans.
Quinn, E. R., Waterloo; Japanese buckwheat.
Raymond, E. A., Bedford; rye.
Reissugue, J., Blaine; corn, beans.
Rogers, George P., Barre Centre; wheat.
Rowley, A. P., S. Cortland; corn.
Ryan, James, Shelby Centre; wheat.
Salisbury, G. & E. M., Hindsburg; red clover.
Sanders, J. P., Bristol Springs; buckwheat.
Shearman, Lewis, and Dwelle, Penn Yan; barley.
Sherwood, John, Medina; barley.
Sholtes, C., Schoharie; corn.
Sims & Tinkham, Akron; barley.
Smith, Moses, Hallsville; corn.
State of New York; collective exhibit of cereals and vegetables.
Stewart, Alex. B., Ballston Centre; rye.
Stillman, D. B., Brookfield; corn.
Stone, John R., W. Fayette; corn.
Sutton, Charles, Shortsville; rye.
Thompson, G. S., Amenia; corn.
Thorn, John W., Enfield; corn.
Timmerman, Anna G., Medina; barley.
Townsend, L. M., Lodi; wheat.
Trickey, Rhodes, Bristol Springs; buckwheat.
Tuttle, Charles W., Clockville; rye, wheat.
Weed, James L., Ballston Spa; corn.
Wilcox, Amos, Jamestown; corn.
Wilcox, James, E. Chatham; corn.
Williams, D. E., Geneva; corn.
Wolverton, Peter, Canandaigua; clover seed.
Wooden, J. H., Waterloo; rye.
Yarter, A., Sandy Hill; rye.

GROUP 2.— BREADS, CAKES, STARCH, ETC.

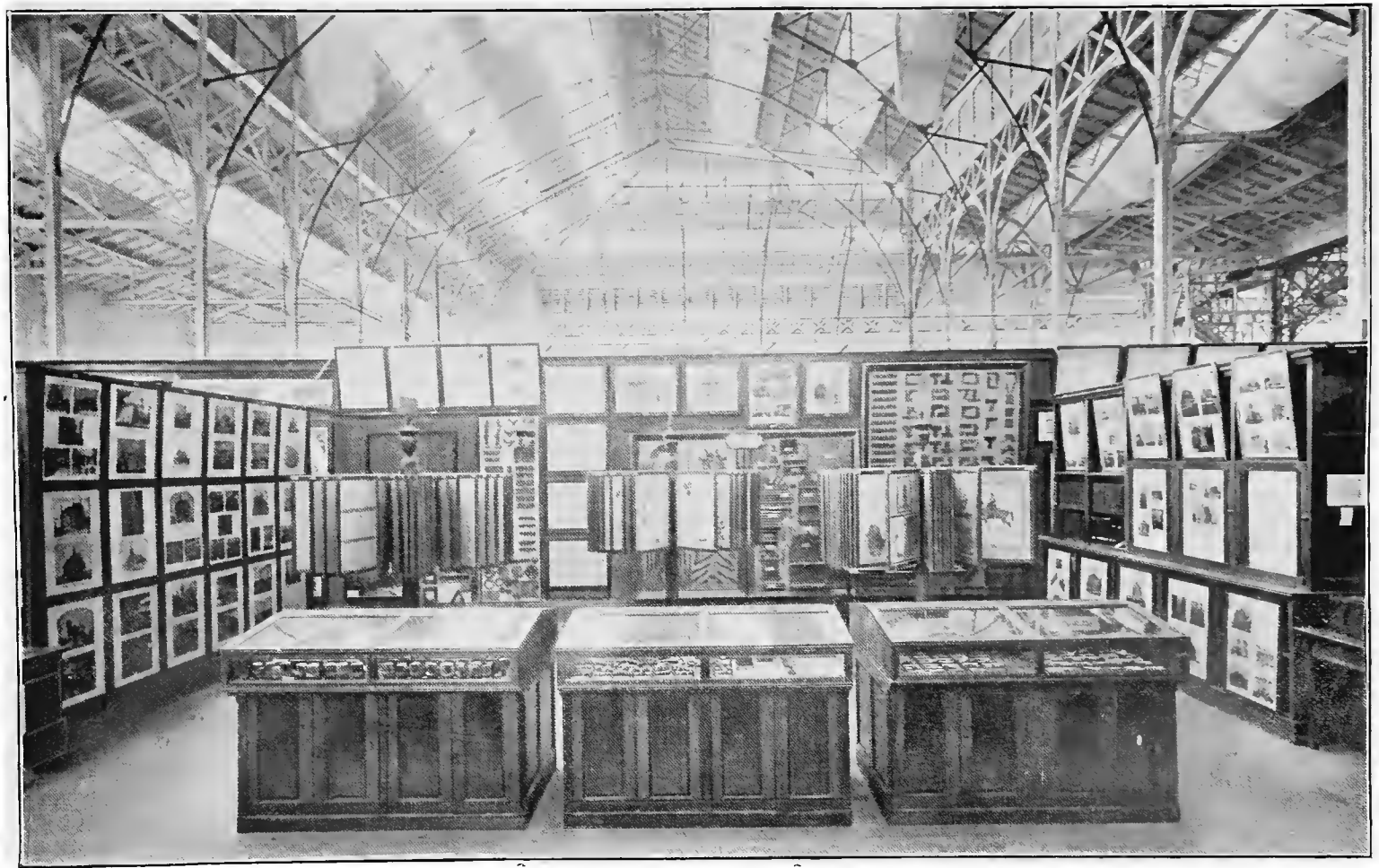
Columbia Macaroni Mfg. Co., New York; Italian pastes.
Corson, Juliet, Miss, New York; cooking school.
Durkee, E. R., New York; baking powder.
Kingsford & Son, Oswego; starches.
Martin, Cornelia E., Auburn; brandied fruits, fruit preserves, fruit jellies, vegetable pickles.
National Starch Mfg. Co., New York; starches.
Thacher's Baking Powder Co., Potsdam; baking powder.

GROUP 3.— SUGARS, HONEY, ETC.

Adams & Sons Co., Brooklyn; chewing gum.
American Sugar Refg. Co., New York; refined cane sugar.
American Sugar Refg. Co., New York; beet root sugar.
Baldwin, A. P., S. Otselic; maple sugar.
Brown, Morris, Otselic Centre; maple sugar.
Falconer, W. T., Mfg. Co., Jamestown; beeswax and beekeepers' supplies.
Fargo, Fred. H., Batavia; comb honey.
Faville, Mrs. Chas., Holland; extracted linden honey.
Hakes, Frank, Cortland; maple syrup.
Hastings, M. E., New York Mills; comb and extracted honey and beekeepers' supplies.
Hetherington, J. E., Cherry Valley; clover comb honey.
Hershiser, Orel L., Buffalo; honey produced from apiary in operation at fair.
Holcomb, Irving, Butternut Grove; maple cream.
Hoffman, Julius, Canajoharie; products in which honey enters, comb honey, extracted honey.
Hutchins, F. C., Massena Springs; clover extracted honey.
Lindsey, C. V., Attica; comb honey.
Little, Malcom, Malcom; amber cane syrup.
Mckeel, Isaac, Poplar Ridge; amber cane syrup.
McIntyre, Wm., Marathon; maple syrup.
Maillard, Henry, New York; confectioneries and chocolates.
National Starch Mfg. Co., New York; glucose.
Randall, Ralph, Pitcher; maple syrup.
Schall & Co., New York; ornamental confectionery.
Smith, N. P., Union Valley; maple syrup, maple sugar.
Tennant, E. M., Willett; maple syrup.
Van Deusen, J., & Son, Sprout Brook; comb foundation.
Warren, A. D., De Ruyter; maple syrup.

GROUP 4.— POTATOES.

Baggerly, B. W., Clifton Springs; potatoes.
Billington, J. F., East Aurora; potatoes.
Bonnel, Geo. A., Waterloo; potatoes.
Brace, J. A., Albion; potatoes.
Bracy, E. M., Ogdensburg; potatoes.
Bruse, H. G., Hoosick Falls; potatoes.



HIGH SCHOOL ALCOVE

Chapman, C. E., Peruville; potatoes.
Cloyes, A. G., Utica; potatoes.
Gascoigne, C. E., Lyons; potatoes.
Hull, G. M., Merrifield; potatoes.
Hurlbert, E., Trenton Falls; potatoes.
Lewis, R. N., Red Hook; potatoes.
Lewis, Sidney, Syracuse; potatoes.
Loucks, Howard, Chittenango; potatoes.
Marks, W. F., Chapinsville; potatoes.
Pearson, H. C., Pitcairn; potatoes.
Preston, E., Pittsford; potatoes.
Qua, Frank, East Hartford; potatoes.
Roberts, W. H., Chateaugay; potatoes.
Rupert, W. P., & Son, Seneca Falls; potatoes.
Ryall, B., Saratoga Springs; potatoes
Slinn, Benj. S., Spring Valley; potatoes.
Titus, R. F., Westbury; potatoes.

GROUP 5.— MISCELLANEOUS FARM PRODUCTS.

Bergeman, G., Yates; peas.
Blanchard, George B., Lyndonville, beans.
Brown, E. C., Rochester; peas.
Brown, R. R., & Son, Carlton; peas.
Burch, Philo, Carlyon; beans.
Conover, Edwin, Carlyon; beans.
Fletcher, James H., Waterport; beans.
Florey, Cubit, Shelby Centre; beans.
Gould, H. D., Yates; peas.
Howard, J. E., Canandaigua; peas.
Howell, S. D., Millville; peas.
James, A. D., Knowlesville; peas.
Leonard, Chas., Shelby Centre; peas.
McBain, A. D., Brockport; beans.
Orleans County Exhibit; peas.
Paine, F. W., Albion; peas.
Payne, George, Billsborough; peas.
Pickett, Daniel, Millville; peas.
Pierce, Romanzo, Lyndonville; beans.
Roberts, D. L., Royalton Centre; beans.
Starr, H. M., Medina; beans.
Tapper, C., Holley; beans.
Tuller, H. B., Rochester; peas.
Turner, Samuel, Lyndonville; peas.
Webster, J. D., & Son, Medina; beans.
Whitney, J. H., Millville; peas.
Whittaker, Wm., Knowlesville; peas.
Whittleton, Jacob, Medina; peas.
Wilkie, C. W., Flint; beans.
Wilson, Wm. V., Medina; beans.

GROUP 6.— FOOD PREPARATIONS.

Curtice Bros & Co., Rochester; canned meats and canned vegetables.
Dadirrian, M. G., New York; matzoon, matzol.
Durkee, E. R., & Co., New York; sauces and condiments.
Erie Preserving Co., Buffalo; catsup and canned vegetables.
Franco-American Food Co., New York; soups, chicken and game patés in cans.
Howell Condensing Co., Goshen; cream fruit pudding, evaporated and sterilized milk, unsweetened.
Humbert, H., & Co., Brooklyn; calf's-foot jelly.
New York Condensed Milk Co., New York; extract of coffee, sweet and plain condensed milk.
Schepp, L., New York; cream fruit puddings, improved cocoanut.

GROUP 7.— DAIRY PRODUCTS, CHEESE.

Alger, G. S., Martinsburg; cheese.
Ayer, J. W., Watertown; cheese.
Ayers, E. E., Rice's; cheese.
Austin, Charles, Deer River; cheese.
Baker, F. P., Camden; cheese.
Bartlett, G. L., Edwards; cheese.
Berry, John H., Sprague ville; cheese.
Blanding, F., Hubbardsville; cheese.
Blum, Albert, Leyden; cheese.
Bobsin, H. J., Collins; cheese.
Boyd, Geo. H., Norwich; cheese.
Bristow, Jas., Sinclairville; cheese.
Brown, A. P., Fowler; cheese.
Burleigh, J. F., Vernon; cheese.
Carpenter, Burt, Moons; cheese.
Carpenter, H. M., Higginsville; cheese.
Carpenter, Z., East Randolph; cheese.
Christ, Jas., Collins; cheese.
Clarke, N. E., Potsdam; cheese.
Cold Brook Factory, Omar; cheese.
Collins Centre Factory, Collins; cheese.
Conover, W. D., Leyden; cheese.
Cooper, W. H., Laona; cheese.
Cowden, W. A., Attica; cheese.
Davey, Albert, Minden; cheese.
De Garmo, A. E., Ilion; cheese.
Dexter, J. W., Lycoming; cheese.
Dickinson, B., So. Rutland; cheese.
Dolfin, Peter, Winterton; cheese.
Dunaway, Fred, East Rodman; cheese.
Douglas, John P., Theresa; cheese.
Douglass, G. B., New York city; cheese.
Eames, A. D., Solsville; cheese.
Eldred, Zenas, Bridgewater; cheese.
Elizabethtown Factory (M. Getman), Mohawk; cheese.
Empire State Factory, Clayton; cheese.
Erickson, Henry, Thornton; cheese.
Evans, J. D., Attica; cheese.
Experimental Station, Geneva; cheese.
Farmers' Factory, Depauville; cheese.
Farrell, James, Morristown; cheese.
Finster, J. E., Laona; cheese.
Fitch, W. H., Lowville; cheese.
Flath, Geo., Philadelphia; cheese.
Flath, Wm., Philadelphia; cheese.

Ford, J. W., Fairfield; cheese.
Fuller, Clark, Spragueville; cheese.
Getry, Alexander, Jordanville; cheese.
Goodrich, D. A., So. Champion; cheese.
Gove, A. E., Pamelia Four Corners; cheese.
Gowanda Factory, Collins; cheese.
Grant, H. L., Rensselaer Falls; cheese.
Grant, R. P., Clayton; cheese.
Graves, B. M., Lowville; cheese.
Graves, E. G., Lowville; cheese.
Green, H. J., Brier Hill; cheese.
Griffith, Wm. S., De Peyster; cheese.
Hall, S. A., Watertown; cheese.
Hambleton, W. N., DeWittville; cheese.
Hardy, John C., Copenhagen; cheese.
Harper, Henry, Sinclairville; cheese.
Harris, J. B., Antwerp; cheese.
Herley, Michael, Constableville; cheese.
Hill Spring Factory, Omar; cheese.
Holden, J. R., Franklinville; cheese.
Hunt, M., Sinclairville; cheese.
Hurst, E. A., Macomb; cheese.
Hutchinson, A. D., Ellington; cheese.
Hydorn, Chas. L., Morristown; cheese.
Irwin, J., Sinclairville; cheese.
Johnson, L. A., Collins; cheese.
Johnson, M. J., De Kalb Junction; cheese.
Jordanville Factory (M. Getman), Mohawk; cheese.
Kast Bridge Factory (M. Getman), Mohawk; cheese.
Kent, D. E., Watson; cheese.
Klopner, Fred E., Port Leyden; cheese.
Lawrence & Darling, Chester; cheese.
Lemon, H. H., Pope; cheese.
Lewis, Frank, Canadea; cheese.
McAdam, W. H., Centralia; cheese.
Markham's Factory, Collins; cheese.
Marshfield Factory, Collins; cheese.
Merriman, A. P., Phœnix; cheese.
Merry, G., Verona; cheese.
Miller, A., Adams; cheese.
Miller, A. E., Siloam; cheese.
Miller, D. H., Rodman; cheese.
Moon, T. E., Collins; cheese.
Morehouse, H. D., Ava; cheese.
Morganstern, C. J., Attica; cheese.
Morts, M. C., Mohawk; cheese.
Mowers, L., Mills' Mills; cheese.
Mutter, Will., West Monroe; cheese.
Neuenschwander, J. & J., Monroe; cheese.
Northup, Frank, Wegatchie; cheese.
Norton, R., Attica; cheese.
Olden, C. S., Leon; cheese.
Oliver, John, Collins; cheese.
"1,000 Island" Factory, St. Lawrence; cheese.
Oyer, Oscar, East Schuyler; cheese.
Parsons, J., Moons; cheese.
Peters, H., Turin; cheese.
Pickard & Baker, Hermon; cheese.
Porter, Geo. B., New Haven; cheese.
Price, W. H., New York city; cheese.
Quinlan, F. B., Van Hornesville; cheese.
Ramsey, Isaac, Morristown; cheese.
Raynor, Lewis J., Copenhagen; cheese.
Rich, Frank, Bigelow; cheese.
Root, C. P., Gilbertsville; cheese.
Rowley, S. C., Kennedy; cheese.
Secor, W. G., Pope; cheese.
Searl, Jay H., Lowville; cheese.
Seaver, R. C., Sinclairville; cheese.
Shannon, M. A., Edenton; cheese.
Sharp, J. J., Howard; cheese.
Sheffner, E. A., Edwards; cheese.
Smith, Alpheus, Norwich; cheese.
Smith, Mrs. A. J., Mannsville; cheese.
Smith, Irving, Richville; cheese.
Smith, Monroe, East Randolph; cheese.
Spencer, W. C., Lowville; cheese.
Star Factory Co., Antwerp; cheese.
Stevens, A. A., Charlotte Centre; cheese.
Stevens, A. M., Orwell; cheese.
Stone, Manly, East Randolph; cheese.
Still, C. B., Theresa; cheese.
Stockwell, O. P., Attica; cheese.
Story, Luther, Kennedy; cheese.
Stuber, S. S., Holland Patent; cheese.
Sweetland, H. S., Randolph; cheese.
Swift, G. C., Jordansville, cheese.
Swift, N. W., Paines Hollow; cheese.
Thompson, Thos., Sinclairville; cheese.
Tower, L. H., Moons; cheese.
Tuttle, A. L., So. Edmeston; cheese.
Union Factory, Collins; cheese.
Van Horn, N., No. Bay; cheese.
Vary, W. H., Harrisburg; cheese.
Wakefield, C. B., Kennedy; cheese.
Water, D. W., Rice's; cheese.
Weller, J., Fairfield; cheese.
West Concord Factory, Collins; cheese.
Wheelock, C. T., West Winfield; cheese.
Wheelock, S. C., No. Winfield; cheese.
Wilder, J. D., Centralia; cheese.
Williams, T. J., Remsen; cheese.
Winchester, M. D., Attica; cheese.
Wilson, C. B., Fredonia; cheese.
Wood, James L., De Kalb Junction; cheese.
Young, Geo., No. Hammond; cheese.
Young & Young, Fillmore, cheese.
Youngliug, Lewis S., New York city, cheese.
Zoar Factory, Collins; cheese.
Zoller, Jacob, Little Falls; cheese.

BUTTER.

Anderson, C., Delhi; butter.
Archibald, J. R., Margaretville, butter.
Bailey, Roscoe, So. Jefferson; butter.
Baker's Gilt Edge Creamery (M. T. Baker), Cherubusco; butter.
Baldwin, A. P., So. Otselic; butter.

Bishop, Wheeler, Castile; butter.
Bloomhower, A. D., Mooers Forks; butter.
Boyd, B. S., Loomis; butter.
Brooks, Archey, Owego; butter.
Brown, Hiram, Canton; butter.
Brown, Jas. P., East Meredith; butter.
Burroughs, C., Roxbury; butter.
Card, I., Berkshire; butter.
Cavin, A. & W. H., Delhi; butter.
Chambers, C. H., No. Lawrence; butter.
Champlin, J. P., Ruth; butter.
Chandler, H. G., Ogdensburg; butter.
Close, W. J., Margaretville; butter.
Cole, J., Margaretville; butter.
Converse, H. J., Southville; butter.
Cotton, A. S., Clifton Springs; butter.
Connor, J., East Meredith; butter.
Craft, Daniel, Stamford; butter.
Craft, F., Roxbury; butter.
Crapsen, E. S., Waddington; butter.
Dales, E., Hobart; butter.
Dales, M., Roxbury; butter.
Danforth, Mrs. G. W., Stamford; butter.
De Silva, W. J., Margaretville; butter.
Dunn, A. T., Hobart; butter.
Eddy, A. S., McDonough; butter.
Erwin, D. W. C., Massena, butter.
Faulkner, Morris, Margaretville; butter.
Finkle, Isaac, Shavertown, butter.
Flaherty, M. H., Massena; butter.
Gibson, Mrs. F. F., Hobart; butter.
Gladstone, J., Andes; butter.
Hanford, C. O., East Meredith; butter.
Hanford, D. J., East Meredith; butter.
Harrington, C. D., Plymouth; butter.
Hawley, F. W., Pittsford; butter.
Hetherington, S., East Meredith; butter.
Hildreth, Frank G., Herkimer; butter.
Hinkley, E. D., Roxbury; butter.
Howe, H. W., Madrid Springs; butter.
Howland, T. P. & O. L., Walton; butter.
Hulbert, John, Chenango; butter.
Humphrey Bros., No. Bangor; butter.
Humphrey Bros., Cherubusco; butter.
Humphrey Bros., Marble River; butter.
Hungerford, Mrs. Wm., Ithaca; butter.
Hunt, C. R., Franklin; butter.
Ingalls, J. R., New Kingston; butter.
Jackson, J. T., Franklin; butter.
Johnson, Geo., Stamford; butter.
Kay, Will E., Herkimer; butter.
Keaton, C. N., Roxbury; butter.
Kennedy, W., Stamford; butter.
Kirkland Creamery, Kirkland; butter.
Kittle, Oren, Jasper; butter.
La Grange Creamery Assoc., Poughkeepsie; butter.
Lawrenee, John C., Kelly's Corners; butter.
Leath, R. B., Shavertown; butter.
Leonard, Theodore H., Crary's Mills; butter.
Liddle, Geo., Andes; butter.
Lloyd, Saml., Franklin; butter.
McAllaster, C., Stamford; butter.
McBain, A. D., Brockport; butter.
McDonald, John T., Delhi; butter.
McKinney, H. J., Pine Bush; butter.
McLaury, D. P., Stamford; butter.
Mable, G. S., Franklin; butter.
Maple Shade Creamery, Texas Valley; butter.
Matteson, H. S., Morris; butter.
Mayham, Milo A., Jefferson; butter.
Merrill, D. W., Franklin; butter.
Middlemist, J., Walton; butter.
Miller, John N., Bovina Centre; butter.
Miller, W. E., Hobart; butter.
Mills & Munson, No. Franklin; butter.
Mitchell, H. H., East Meredith; butter.
Moore, J. Burke, Oxford; butter.
Morse, H., Roxbury; butter.
Morton, Levi P., Rhinecliff; butter.
Mowry, W. R., Oxford; butter.
Mundy, Jas. R., Norwich; butter.
Munson, E. S., Franklin; butter
Neuenschwander, J. & J., Monroe; butter.
Nichols, John O., Harpersfield; butter.
Paine, John L., Jordanville; butter.
Palmer, D. P., Franklin; butter.
Parker & Edgerton, Coventry; butter.
Pease, H. N., Delhi; butter.
Peters, D. W., Stamford; butter.
Peters, E. V., Stamford; butter.
Platt, H. N., McDonough; butter.
Potter, C. O., Franklin; butter.
Prentice, W. E., Owego; butter.
Purdy, O. B., Downsville; butter.
Race, E. E., Greene; butter.
Reynolds, C. D., Roxbury; butter.
Roberts, J. I., East Meredith; butter.
Rose, Edmund, Delhi; butter.
Rutherford, J. T., Canton; butter.
Rutherford, Thomas F., Madrid; butter.
Rutherford, W., Waddington; butter.
Sanford, D. E., Nicholsville; butter.
Sanford, R. J., Hopkinton; butter.
Sanford, R. M., Hobart; butter.
Sanford, R. W., Margaretville; butter.
Seneca Co-Operative Creamery (August Johnson); butter.
Shaw, A., Andes; butter.
Shaw, J. B., Crary's Mills; butter.
Shattuck, J. B., Cherry Creek; butter.
Sherruck Creamery, Sherruck; butter.
Shults, A. M., State Line; butter.
Shutts, E. M., Stamford; butter.
Sibley & Rowley, Kennedy, butter.
Sigbee, Jas., Franklin; butter.
Simpson, D. C., Jasper; butter.
Slosson, J. B., Roxbury; butter.
Smith, W. B., Bovina Centre; butter.
Squires, A., Franklin; butter.
Standard Butter Co., Owego; butter.
Stringer, Wm., Franklin; butter.
Strangeway, J. L., Andes; butter.
Talcott, C. H., Massena Spa; butter.
Thompson, A. L., Cherry Creek; butter.

Thompson, J. R., Delhi; butter.
Van Amburgh, E., Stamford; butter.
Van Benschoten, J., New Kingston; butter.
Van Wagenen, Jared, Lawyersville; butter.
Whitford, Leroy, Stow; butter.
Wilcox, C. C., Oswego Falls; butter.
Wilcox, James, Shavertown; butter.

De Laval Separator Co., The, New York; cream separators.
Genesee Salt Co., Piffard; dairy salt.
Hansen's, Chr., Laboratory, Little Falls; rennet extract, rennet tablets and butter color.
Iron Clad Mfg. Co., New York; milk cans and pail.
Thacher Mfg. Co., Potsdam; butter color.

### GROUP 8.— AROMATIC SUBSTANCES.

Consolidated Cigarette Co., New York city; tobacco cigarettes.
Durkee, E. R., & Co, New York city; ground spices, mustard.
Ellinger, Julius, & Co., New York city; cigars.
Fox & Scarle, New York city; hops.
Garcia, F. A., & Co., New York city; cigars.
Gulden, Charles, New York city; mustard prepared.
Maillard, Henry, New York city; chocolate and cocoa.
New York State Agricultural Exhibit; leaf tobacco.
Lozano, Pendas & Co., NewYork city ; cigars.

Sanchez & Haya, New York city; cigars, Havana cigars.
Seidenberg & Co., New York city; cigars.
Stachelberg, M., & Co., New York city; cigars.
Stahl, Jacob, Jr., & Co., New York city; cigars.
Surbrug, J. W., New York city; Golden Sceptre smoking tobacco.
Upmann. Carl, New York city; seed and Havana cigars.
Wilbur, D. F., Oneonta; hops.
Ybor, V. M., & Manrara, New York city; Havana tobacco, cigars.

### GROUP 9.— COTTON, WOOL AND SILK.

Bardwell, A., Fargo; wool.
Cossitt, Davis, Onondaga; wool.
Curry, William, & Son, Hartwick; wool.

Osburn & Ladd, Victor; wool.
Ray & Markham, Hemlock Lake; wool.
Warren, J. Hobart, Hoosick Falls; wool.
Wynn, T. J., Lakeville; wool.

### GROUP 10.— WATERS.

Deep Rock Spring Co., Oswego; mineral water.
Morgan, John, New York; ginger ale and soda water, mineral water.

New York State; collective exhibit of mineral waters.
Vichy Spring Co., Saratoga; mineral water.

### GROUP 11.— WHISKIES, ALCOHOLS.

Osborn, John, Son & Co., New York; antediluvian blended rye whisky.

Wolfe's, Udolpho, Son & Co., New York; Wolfe's Schiedam aromatic chnapps.

### GROUP 12.— MALT LIQUORS.

Baedleston & Woerz, New York; beer and pale stock ale in wood and bottles.
Evans, C. H., & Sons, Hudson; ales and stout.

Liebmann, S., Sons Brewing Co., Brooklyn; ale and lager beer in wood and bottles.
Mayer, David, Brewing Co., New York; lager beer in wood and bottles.

### GROUP 13.— FERMENTING MACHINERY.

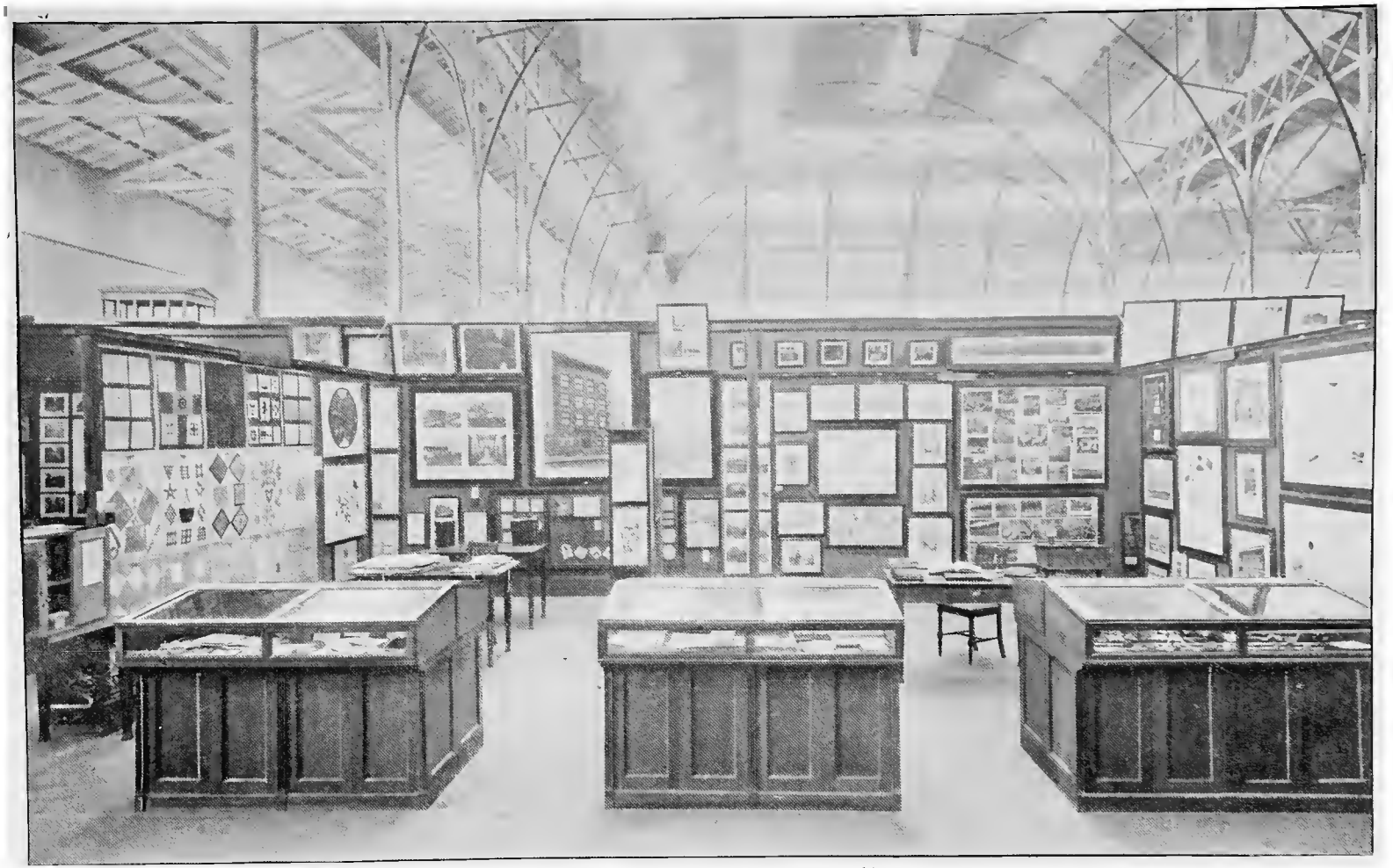
German American Filter Co., New York; beer filter.

Scoville, E. U., Manlius; oil and molasses gates.

### GROUP 14.— FARMS AND FARM BUILDINGS.

Chanler, John E., New York· steel and brick road.
National League for Good Roads, New York; Macadam & Telford Co. roads.
New York State, Albany; seventeen varieties of soil, rich in plant food.

Seneca Co. Farmers; black loam, wheat, corn, oats, barley, products.
Webster & Hannum, Cazenovia; bone and vegetable cutter.



PRIVATE SCHOOL ALCOVE

GROUP 16.— FARM TOOLS.

Bender, J. O., & Son, Fayetteville; transplanter.

Birdsall Co., The, Auburn; traction engine.

C. C. Plow Co., Elmira; plows.

Columbian Cordage Co., Auburn; binder twine.

Dederick, P. K., & Co., Albany; presses.

Engelberg Huller Co., Syracuse; rice huller, lawn rake.

Gillette Clipping Machine Co., New York; clipping and shearing machines.

Kemp & Burpee Mfg. Co., Syracuse; manure spreader.

Morgan, D. S., & Co., Brockport; harrow and cultivators.

Osborn, D. M., Auburn; disc harrows.

Syracuse Chilled Plow Co., Syracuse; plows and cultivators.

Westinghouse Co., The, Schenectady; bean threshing machine, tubular boiler.

Wood, Walter A., Hoosick Falls; mower.

GROUP 17.— FERTILIZERS.

Grace, W. R., & Co., New York; nitrate of soda.

Knox, Chas. B., Johnstown; calf's-foot gelatine.

GROUP 18.— OILS, SOAPS, ETC.

American Cotton Oil Co., The, New York; salad oil, cotton seed oil, cotton seed meal, cottoline.

Baumer, Francis, Syracuse; candles.

Baumer, Francis, Syracuse; Baumer's patent high altar candle extract.

Durkee, E. R., & Co., New York; mustard seed oil.

Eckerman & Will, Syracuse; candles and other articles made from beeswax.

Miller, Wm. P., Co., Brooklyn and Chicago; lubricating machines and compounds.

Phœnix Candle Co., Syracuse; candles, candle shades.

State of New York, Albany; flaxseed.

The foregoing list of awards to exhibitors from New York has been carefully compared with the records in this department and is correct.

J. S. BROWNING,
*Chief of Department of Agriculture.*

*March* 21, 1894.

# AWARDS GRANTED NEW YORK STATE EXHIBITS IN DEPARTMENT B, HORTICULTURE.

## GROUP 20.— VITICULTURE.

Experiment Station, Geneva; collection of grapes.

Dunning, D. M., Auburn; collection of grapes.

New York State, Albany; grapes (crops of 1892 and 1893).

New York State, Albany; photos of vines, models of training, etc.

### WINES.

Banniher, J. H., New York; wines, Norton's.

Brocton Wine Cellars, Brocton; wines, Catawba, 1880; brandy, fine old.

Brotherhood Wine Co., New York; wines, sweet Delaware and pure table claret.

Dewey, H. T., & Sons, New York; wines, Delaware; port, Dewey's.

Empire State Wine Co., Penn Yan; brandy, wines, port and claret.

Garlock, Abram, Newark; cider brandy.

Garlock, P., & Son, Phelps; cider brandy.

Germania Wine Co., Hammondsport; Reisling.

Germania Wine Co., Hammondsport; wines, champagne, "Excelsior."

Hammondsport Wine Co., Hammondsport; brandy.

Hammondsport Wine Co., Hammondsport; sparkling wine, Golden Age, Extra Dry Catawba.

Irondequoit Wine Co., Rochester; wines, sweet Catawba.

Lake Keuka Wine Co., Hammondsport; wines; champagne, L. K. W.; port.

Miller, George, Bristol Springs; wines, port.

New York State, Albany; collection of brandies.

Pleasant Valley Wine Co., Rheims; wines, port; champagnes, Great Western, Extra Dry, Carte Blanche, Dry Catawba.

Sammons, Warren, Rosendale; cider brandy.

Sayer, J. L., & Son, Warwick; cider brandy.

Shafer, D. A., Montgomery; cider brandy.

Smith, W. M., Bath; cider brandy.

Urbana Wine Co., Hammondsport; wines, champagne, "Gold Seal," "Extra Dry."

Wisner, Charles E., Warwick; cider brandy.

The foregoing list of awards to exhibitors from New York has been carefully compared with the records of this department and is correct.

H. W. CANNON,

*February* 20, 1894. *Chief of Department of Viticulture.*

## GROUP 21.— POMOLOGY.

Boldridge, C. J., Kendaia; unfermented grape juice.

Brockport Union Agricultural Society, Brockport; apples.

Brocton Wine Co., Brocton; fruit juices.

Central New York Horticultural Society, Syracuse; apples and pears.

Curtice Bros. & Co., Rochester; jellies, jams and marmalade.

Doyle, Michael, & Co., Rochester; evaporated apples.

Ellwanger & Barry, Rochester; pears.

Erie Preserving Co., Buffalo; fruits in solution.

Experiment Station, Geneva; currants and gooseberries, apples and pears.

Farmer, L. J., Pulaski; strawberries.

Genesee Fruit Co., Genesee; carbonated cider.

Gordon & Dilworth, New York; fruits in solution, jellies, jams, fruit syrups, etc.

Moore, Jacob, Attica; collection of currants.

New York State, Albany; apples, pears and stone fruits, small fruits, strawberries, plants in fruit.

New York State, Albany; fruit marmalades.

Orange County Agricultural Society, Montgomery; apples, quinces and pears.

Orleans County Agricultural Society, Albion; apples.

Powell, George T., Ghent; apples.

Snow, G. C. & W. C., Penn Yan; unfermented grape juice.

Western New York Horticultural Society, Rochester; apples and pears.

GROUP 22.— FLORICULTURE.

Abendroth Bros., New York; plant receptacles, vases, etc.

Childs, John Lewis, Floral Park; collection of Iris.

Cutting, Wm. B., Oakdale; collection of crotons.

Dean, James, Bay Ridge; collection of bay trees, specimen palms.

Donlan, Eileen, Brooklyn; bedding plants in ornamental design.

Ellwanger & Barry, Rochester; collection of hollyhocks, peonies and rhododendrons.

Gould, Jay, Irvington; collection of palms.

Henderson, Peter, & Co,, New York; collection of cyclamens, cannas, bulbs, primroses, pansies and hollyhocks.

*Hitchings & Co., New York; greenhouse appliances, etc.; heating apparatus for greenhouses.

Jansen, Edward, New York; collection of wicker vases.

Joosten, C. H., New York; insect powder and bellows for applying.

Kelsey, Fred. W., New York; collection of rhododendrons.

Krick, Wm. C., Brooklyn; immortelle lettering.

Long, Daniel B., Buffalo; floral photos.

*Lord & Burnham Co., Irvington; greenhouse appliances, etc.; heating apparatus for greenhouses.

Marc, G., & Co., Woodside; collection of standard roses.

New York Florists' Club, New York; collection of roses and carnations; horticultural literature; "Old Fashioned Garden."

New York State Museum, Albany; collection of fungi.

New York State, Albany; collection of roses; collection of palms; collection of ornamental foliage plants; collection of tuberous begonias.

Nilsson, Wm., Woodlawn; bedding plants in ornamental designs.

Oasis Nursery Co., Westbury Station; collection of tuberous begonias (cut).

Parsons' Sons Co., Flushing; collection of rhododendrons.

Pierson, F. R., & Co., Tarrytown; collection of cannas; collection of roses (cut).

Reed & Keller, New York; florists' wire designs.

Scholes, Frederick, Brooklyn; collection of orchids.

Scollay, J. A., Brooklyn; plant and flower sprinklers.

Siebrecht & Walley, New Rochelle; aquatic plants.

Small, H. H., & Sons, New York; art floral design "The National Capitol."

Stecher Lithographing Co., Rochester; floral lithographs.

Thorburn, J. M., & Co., New York; collection of cyclamens.

Tricker, Wm., Dongan Hills; aquatic plants.

*Weathered, Thos., & Sons, New York; villa conservatory.

Webb, Mrs. H. Walter, New York; mounted ferns.

*NOTE.— These exhibits were transferred from group 26 to group 22 by order of John Boyd Thacher, chairman executive committee on awards, because of their close relation to floriculture.

GROUP 23.— CULINARY VEGETABLES.

Bonnell, G. A., Waterloo; potatoes.

Experiment Station, Geneva; sweet corn, peppers, peas, beans, tomatoes, squashes, cucumbers, melons, radishes, beets, carrots, salsify, collection of lettuce and onions.

Gordon & Dilworth, New York; olives in bottles, French capers and salad dressing.

Howard, S. G., Rochester; collection of vegetables.

McCready, Mrs. J. F., Buffalo; canned vegetables.

New York State, Albany; canned tomatoes, collection of vegetables.

GROUP 24.— GARDEN SEEDS.

Henderson, Peter, & Co., New York; collection of garden seeds.

GROUP 25.— ARBORICULTURE.

Ellwanger & Barry, Rochester; collection of woody plants.

Parsons & Sons, Flushing, L. I.; collection of trees.

GROUP 26.— METHODS AND APPLIANCES.

Caldwell Lawn Mower Co., Newburgh; lawn mowers.

Chadburn & Caldwell Mfg. Co., Newburgh; lawn mowers.

Henderson, Peter, & Co., New York; plats of growing lawn grass (sown in 1892).

Stott Garden Implement Co., New York; insecticides and appliances.

The foregoing list of awards to exhibitors from New York has been carefully compared with the records of this department and is correct.

*January* 13, 1894. HENRY HOLZAPPEL, JR.,
*Chief of Department of Horticulture.*

UNIVERSITY EXTENSION ALCOVE

# AWARDS GRANTED NEW YORK STATE EXHIBITS IN DEPARTMENT C, LIVE STOCK.

## GROUP 27.— HORSES, MULES.

Hawley, E. F., Pittsford; Shetland ponies.— Stallion, 4 years or over, fourth premium, $20.

Hawley, Mrs. E. F., Pittsford; ponies in harness.— Mare or gelding, above 9 and under 11 hands, medal; four-in-hand, above 9 and under 12 hands, medal; tandem, pair of mares, or mare and gelding, medal.

New York Condensed Milk Company, New York city; truck and delivery teams. —Best pair of horses, first medal.

Otis, Ira L., Rochester; French coach horses.— Mare, 5 years or over, third premium, $50; mare, 5 years or over, diploma; mare, 2 years, under 3, fourth premium, $25; mare, 1 year, under 2, fourth premium, $25.

Sharra, J. B., Mexico; Cleveland bay horses.— Stallion, 2 years, under 3, third premium, $50.

## GROUP 28.— CATTLE.

Cogswell, P. J., Rochester; Jersey cattle.— Bull, 3 years or over, fourth premium, $15.

Cooley, A. H., Little Britain; Jersey cattle.— Bull, 3 years or over, second premium, $35; bull, under 1 year, second premium, $30; cow, 3 years, under 4, second premium, $35; heifer, 2 years, under 3, second premium, $35; heifer, under 1 year, third premium, $20; herd, graded by ages, second premium, $75; young herd, consisting of one bull and four heifers, all under 2 years, bred by exhibitor, fourth premium, $25; four animals of either sex, the get of one sire, second premium, $75; two animals of either sex, the produce of one cow, first premium, $80; bull, any age, third premium.

Davidson, G. Howard, Millbrook; Guernsey cattle.— Bull, 3 years or over, first premium, $50; bull, 1 year, under 2, first premium, $50; bull, under 1 year, first premium, $40; cow, 4 years or over, second premium, $35; cow, 3 years, under 4, third premium, $20; heifer, 2 years, under 3, second premium, $35; heifer, 1 year, under 2, first premium, $40; heifer, 1 year, under 2, third premium, $20; heifer, under 1, first premium, $40; heifer, under 1, third premium, $20; herd, graded by ages, first premium, $100; young herd, consisting of one bull and four heifers, all under 2, bred by exhibitor, first premium, $100; four animals of either sex, the get of one sire, first premium, $100; two animals of either sex, the produce of one cow, second premium, $40; bull, any age, medal and $50.

Kent, A. M., Jamestown; Brown Swiss cattle.— Bull, 3 years or over, first premium, $35.

Pittsford Stock Farm, Pittsford; Jersey cattle.— Bull, 3 years or over, third premium, $20.

Sweet, C. A., Buffalo, Jersey cattle.— Cow, any age, medal and $50.

Wilbur, D. F., Oneonta; Holstein-Friesians.— Bull, 3 years or over, first premium, $50; bull, 3 years or over, third premium, $20; bull, 2 years, under 3, first premium, $50; bull, 1 year, under 2, first premium, $50; bull, 1 year, under 2, second premium, $35; bull, under 1, first premium, $40; bull, under 1, second premium, $30; cow, 4 years or over, third premium, $20; cow, 4 years or over, fourth premium, $15; cow, 3 years, under 4, second premium, $35; cow, 3 years, under 4, third premium, $20; heifer, 2 years, under 3, second premium, $35; heifer, 2 years, under 3, third premium, $20; heifer, 1 year, under 2, first premium, $40; heifer, 1 year, under 2, fourth premium, $15; heifer, under 1, first premium, $40; heifer, under 1, third premium, $20; herd, graded by ages, first premium, $100; herd, graded by ages, third premium, $50; young herd, one bull and four heifers, under 2, first premium, $100; four animals, either sex, get of one sire, first premium, $100; four animals, either sex, the get of one sire, third premium, $50; two animals, either sex, produce of one cow, second premium, $40; bull, any age, medal and $50; bull, under 1 year, medal and $25.

## GROUP 29.— SHEEP.

Cossitt, Davis, Syracuse; Merino sheep. —Ram, under 1, third premium, $15; ewe, 2 years, under 3, first premium, $35.

Curry, T. N., Hartwick; Cheviots.—Ram, 3 years or over, third premium, $15; ram, 2 years, under 3, third premium, $15; ram, 1 year, under 2, second premium, $20; ewe, 2 years, under 3, first premium, $25; ewe, 2 years, under 3, second premium, $20; ewe, 1 year, under 2, first premium, $25; ewe, 1 year, under 2, fourth premium, $10; ewe, under 1, first premium, $20; ewe under 1, third premium, $10; ram and three ewes, all over 2 years, second premium, $25; pen of two rams and three ewes, under 2 years, bred by exhibitor, second premium, $25.

Curry, Wm., & Son, Hartwick; Cheviots.—Ram, 3 years or over, first premium, $25; ram, 3 years or over, second premium, $20; ram, 2 years, under 3, first premium, $25; ram, 2 years, under 3, second premium, $20; ram 1 year, under 2, first premium, $25; ram under 1, third premium, $10; ram under 1, fourth premium, $10; ewe, three years or over, first premium, $25; ewe, 2 years, under 3, third premium $15; ewe, 1 year, under 2, second premium, $20; ewe, 1 year, under 2, third premium, $15; ewe, under 1, fourth premium, $10; ram and three ewes, all over 2 years, first premium $30; pen of five ewes, 2 years or over, bred by exhibitor, first premium, $35, pen of two rams and three ewes, under 2 years, bred by exhibitor, first premium, $35; ram of any age, $50; ewe of any age, $50.

Lee, R. M., South Bloomfield; Merino (A) sheep.—Ram, 2 years, under 3, fourth premium, $15.

Lough, George, Hartwick; Cheviots.—Ram, 3 years or over, fourth premium, $10; ram, 2 years, under 3, fourth premium, $10; ewe, 3 years or over, third premum, $15; pen of five ewes, 2 years or over, bred by exhibitor, second premium, $25; pen of two rams and three ewes, under 2 years, bred by exhibitor, third premium, $20.

Martin, G. F., Rush; Merino sheep.—Pen of two rams and three ewes, third premium, $25.

Martin, Geo. F., Rush; Merino (B) sheep.—Ram, 2 years, under 3, fourth premium, $15.

Martin, Peter, Rush; Merino (A) sheep.—Ram 3 years or over, third premium, $20; ram and three ewes, all over 2 years, third premium, $25.

Van Dresser Bros., Cobleskill; Cheviots.—Ram, 1 year, under 2, third premium, $15; ram, 1 year, under 2, fourth premium, $10; ewe, 3 years or over, second premium, $20; ewe, 2 years, under 3, fourth premium, $10; ram and three ewes, all over 2 years, fourth premium, $15; pen of two rams and three ewes, under 2, bred by exhibitor, fourth premium, $15.

## GROUP 31.—SWINE.

Davis, E. W., Oneida; Cheshires.—Boar, 1 year, under 2, third premium, $15; boar, under 6 months, second premium, $15; sow, 6 months, under 1 year, third premium, $10; sow, under 6 months, third premium, $10; boar and three sows, under 1, fourth premium, $15; boar and three sows, bred by exhibitor, fourth premium, $20; boar and three sows, under 1, third premium, $20; boar and three sows, bred by exhibitor, third premium, $25; four swine, get of same boar, fourth premium, $10; four pigs, produce of same sow, third premium, $20.

Doolittle, L. F., Ouaquaga; Cheshires.—Boar, 1 year, under 2, first premium, $25; boar, 6 months, under 1 year, second premium, $15; sow, 2 years or over, first premium, $25; sow, 2 years or over, fourth premium, $10; sow, 1 year, under 2, second premium, $20; sow, six months, under 1 year, second premium, $15; boar and three sows, over 1 year, first premium, $30; boar and three sows, bred by exhibitor, second premium, $30; boar and three sows, under 1 year, second premium, $25; boar and three sows, bred by exhibitor, second premium, $30; four swine, get of same boar, second premium, $30; four pigs, produce of same sow, second premium, $30; sow, any age, first premium, $35.

Freeman & Button, Cotton's; Cheshires.—Barrow, 14 and under 18 months old, second premium, $20; barrow, 10 and under 14 months old, second premium, $20; barrow, 6 and under 10 months old, second premium, $15; pen of three barrows, second premium, $20; boar, 2 years or over, first premium, $25; boar, 1 year, under 2, fourth premium, $10; boar, 6 months, under 1 year, fourth premium, $10; boar under 6 months, fourth premium, $10; sow under 6 months, fourth premium, $10; boar and three sows over 1 year, third premium, $20; boar and three sows, bred by exhibitor, third premium, $25; boar and three sows under 1 year, fourth premium, $20; boar and three sows, bred by exhibitor, fourth premium, $20; four pigs, produce of same sow, fourth premium, $10.

Hurlburt, B. J., Clymer; Improved Yorkshire.—Boar, 1 year, under 2, first premium, $24; boar, under 6 months, third premium, $11.

Hurlburt, B. J., Clymer; Cheshires.—Barrow, 14 and under 18 months old, first premium, $25; barrow, 10 and under 14 months old, first premium, $25; bar-

row, 6 and under 10 months old, first premium, $20; pen of three barrows, first premium, $25; boar, 1 year, under 2, second premium, $20; boar, 6 months, under 1 year, first premium, $20; boar, 6 months, first premium, $20; boar, under 6 months, third premium, $10; sow, 1 year, under 2, first premium, $25; sow, 1 year, under 2, fourth premium, $10; sow, 6 months, under 1 year, first premium, $20; sow, under 6 months, first premium, $20; sow, under 6 months, second premium, $15; boar and three sows, over 1 year, second premium, $25; boar and three sows, bred by exhibitor, first premium, $35; boar and three sows, under 1 year, first premium, $30; boar and three sows, bred by exhibitor, first premium, $35; four swine, get of same boar, first premium, $40; four swine, get of same boar, third premium, $20; four pigs, produce of same sow, first premium, $40; boar, any age, first premium, $35; boar, any age, bred by exhibitor, first premium, $50; sow, any age, bred by exhibitor, first premium, $50; sow, 6 months, under 1 year, fourth premium, $10.

Metcalf Bros., East Elma; Berkshires.— Boar, 1 year, under 2, first premium, $50; sow, 2 years or over, second premium, $40; sow, 6 months, under 1 year, fourth premium, $20.

Seeley, James, Geneva; Essex.— Boar, 6 months, under 1 year, third premium, $25; four pigs, under 6 months, produce of same sow, fourth premium, $55.

Spicer, W. E., Harvard; Berkshires.— Boar, 2 years or over, first premium, $50; boar, 1 year, under 2, fourth premium, $20; boar, 6 months, under 1 year, third premium, $30; sow, 2 years or over, third premium, $30; sow, 1 year, under 2, second premium, $40; boar and three sows, over 1 year, third premium, $40; boar and three sows, under 1 year, bred by exhibitor, second premium, $60; boar and three sows, under 1 year, fourth premium, $30; four swine, get of same boar, bred by exhibitor, fourth premium, $55; boar any age, first premium, $75; boar and three sows, under 1 year, bred by exhibitor, third premium, $50,

## GROUP 34.— HOMING PIGEONS.

Barwell, Wm., New York; for bird making fourth speediest return to New York city and vicinity from exposition grounds, medal and diploma.

Bennert, Wm., New York city; for bird making third speediest return to New York city and vicinity from the exposition grounds, medal and $15.

Book, Wm., Jr., New York; for bird making second speediest return from exposition grounds to New York city and vicinity, second medal, $25.

Clarke, Thos. J., Ozone Park, L. I.; for bird making speediest return from exposition grounds to New York city and vicinity, first medal, $50; special premium for bird reaching New York city and vicinity within seventy-two hours, special medal.

## MISCELLANEOUS.

American Glucose Co., Buffalo; Buffalo gluten food (cooked corn meal).

O. Lindemann & Co., New York; bird cages (tin).

The foregoing list of awards to exhibitors from New York has been carefully compared with the records of this department, and is correct.

*March* 21, 1894. J. S. BROWNING,

*Chief of Department of Agriculture in charge of Live Stock.*

# AWARDS GRANTED NEW YORK STATE EXHIBITS IN DEPARTMENT D, FISH AND FISHERIES.

GROUP 37.— AQUATIC LIFE.

Ams, Max, New York; mounted specimen of sturgeon (collective exhibit).

Harris, Wm. C., New York city; lithographs of fishes.

Skinner, G. M., Clayton; trolling spoon, photo and oil paintings of muskellunge.

GROUP 38.— SEA FISHING.

Court, John W., Brooklyn; fish hooks.

Kunz, G. F. (of Tiffany & Co.), New York city; literature on pearls; report on pearls of North America.

GROUP 39.— FRESH WATER FISHING.

Buel, The J. T., Co., Whitehall; artificial bait and trolling spoons.

Forest & Stream Publishing Co., New York city; "Forest and Stream," a weekly publication, books, photographs, etc.

St. Lawrence River Skiff, Canoe & Steam Launch Co., Clayton; boats for anglers' use.

Spalding, A. G., & Bros., New York city; fishing rods.

Von Hofe, Julius, Brooklyn; fishing reels.

Yawman & Erbe, Rochester; automatic reel.

GROUP 40.— FISHERY PRODUCTS.

Ams, Max (collective exhibit), New York; canned fish.

Kahrs, F., New York city; fish glue and glue pot.

Major, A., New York city; Major's cement.

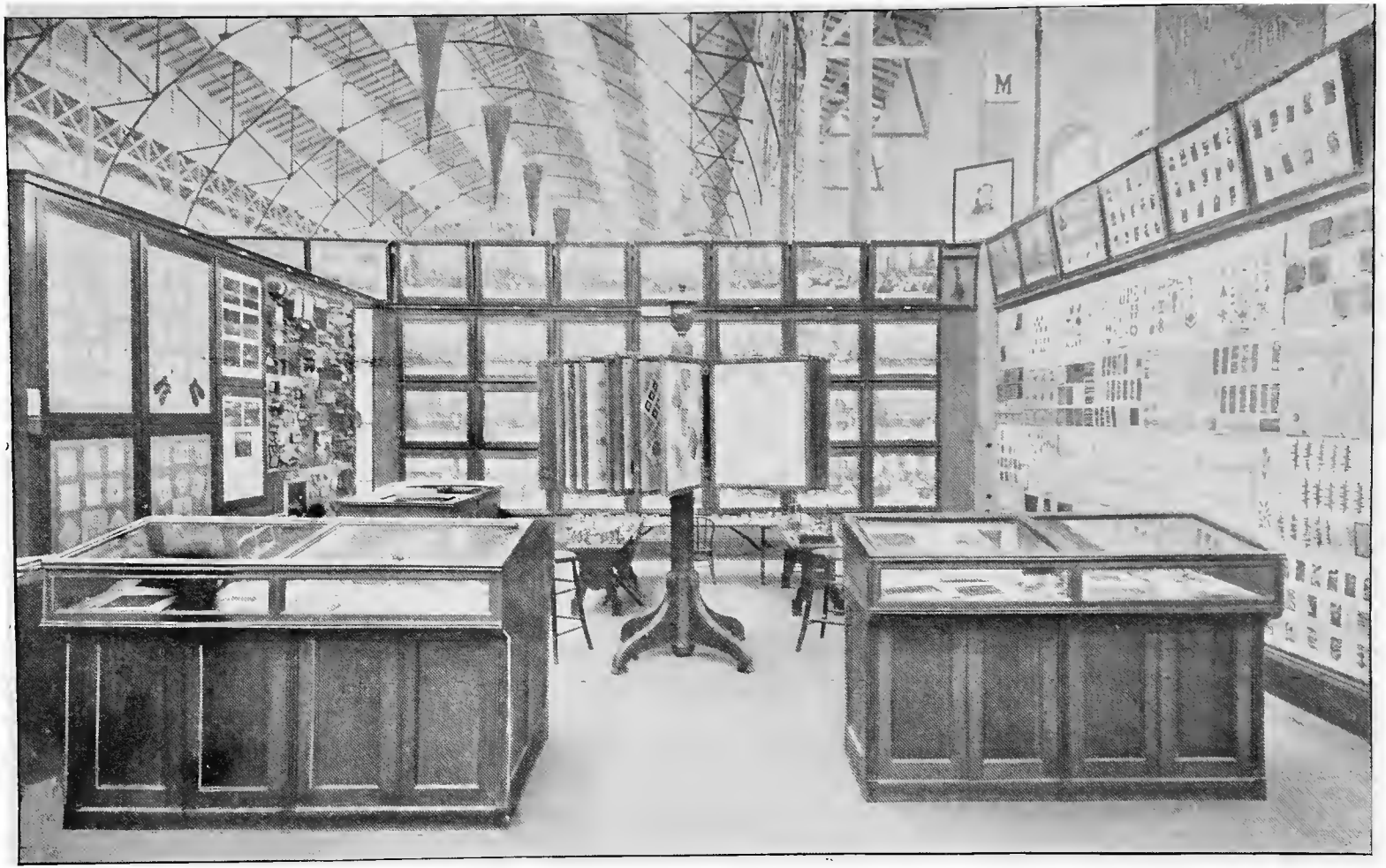
Tiffany & Co., New York; Oriental and American pearl collection.

Wolff & Reessing, New York city; canned sardines, etc.

The foregoing list of awards to exhibitors from New York has been carefully compared with the records of this department and is correct.

H. W. CANNON,

*February* 20, 1894. *Chief of Department of Fish and Fisheries.*




KINDERGARTEN ALCOVE

# AWARDS GRANTED NEW YORK STATE EXHIBITS IN DEPARTMENT E, MINES AND MINING.

Exhibits marked (*) made in connection with New York State Museum.

## GROUP 42.— MINERALS, ORES, ETC.

*Chateaugay Ore & Iron Co., Plattsburg; magnetite.

Crum, A. B., New York; liquid inclusions, crystals, etc.

English, Geo. L., & Co., New York; minerals systematically arranged, complete collection of gems.

Kunz, Geo. F. (Tiffany & Co.), New York; platinum, meteorites, diamond association.

New York Mineralogical Club, New York; minerals, N. Y. Island.

New York State Museum, Albany; N. Y. minerals.

New York State Museum, Albany; iron ores.

New York State Museum, Albany; magnetites.

*Port Henry Iron Ore Co., Port Henry; magnetite Bessemer ores.

Shapleigh, Walden, Gloucester; ores, etc.

Tiffany & Co., New York; fine minerals, gems and precious stones.

Ward's Natural Science Establishment, Rochester; rocks, specimens illustrating various structures, textures and forms explained by rock masses.

Ward's Natural Science Establishment, Rochester; meteorites, minerals, carbons, etc.

*Witherbee, Sherman & Co., Port Henry; magnetites.

## GROUP 43.— MINERAL COMBUSTIBLES.

New York State Museum, Albany; crude petroleum.

Standard Oil Company, New York; Galena engine, coach and car oils, El Dorado engine oil, El Dorado castor and Ruddy Harvester oil, electric cycle, Atlantic red oil, marine engine oil, ice machine oil, cycle lantern oil, composite candles, mineral soap, Continental ointment, electric light mining candles, electric light domestic candles, paraffine candles, Miners' Sunshine, roll neck grease, Salamander hot neck grease, mica axle grease, llama wool oil, illustrated exhibit of the petroleum industry, Matchless valve oil, Harmless oil, stove gasoline, redistilled street lighting gasoline, gas naphtha, deodorized naphtha for varnish and painters' uses, 300 degree illuminating oil, 175 degree headlight oil, common illuminating oils, high grade illuminating oils, signal oils, capital cylinder oil for lubricating cylinders in stationary engines, marine valve oils for lubricating cylinders in marine engines, Renown engine oil for lubricating all classes of machinery except cylinders, Zero cold test black oil for car axles, mineral sewing machine oil, thread cutting oil, coach oil for coach axles, crude petroleum, oil-bearing, rocks, finished products from Ohio crude petroleum "Lima oil," high gravity gasoline.

## GROUP 44.— BUILDING AND ORNAMENTAL STONES.

*Genesee Salt Co., Piffard; velvet grain and table salt.

New Pediara Onyx Co., New York; Mexican onyx.

New York State Museum, Albany; building stone, slates for roofing and ornamental purposes.

New York State Museum, Albany; road materials, geological obelisk showing formation of New York.

*Ornamental Slate Co., Middle Granville; red roofing slates.

## GROUP 45.— GRINDING AND POLISHING SUBSTANCES.

Behr, Herman, & Co., New York; flint, emery papers, pumice and rotten stone.

*Lynch, Daniel, Minerva; garnet (massive).

## GROUP 46.— GRAPHITE, CLAYS, ETC.

Dixon Crucible Co., Ticonderoga; graphite, crude, in lumps.

Johns, H. W., Mfg. Co., New York; asbestos.

Johns, H. W., Mfg. Co., New York; technical display of asbestos.

New York State Museum, Albany; clays.

*Staten Island Kaolin Co., Staten Island; kaolin.

Van Dusen, F. M., et al., Glasco; tempering sands, etc.

GROUP 47.— LIMESTONE, CEMENTS, ETC.

Barber Asphalt Paving Co., New York; asphalt pavements for streets.

Barber Asphalt Paving Co., New York; refined asphalt and asphalt cement.

*Buffalo Cement Co., Buffalo; hydraulic cement.

*Horan Brothers, Medina; flagstone.

*Lawrence Cement Co., Rosendale; cement.

New York State Museum, Albany; road metals.

New York State Museum, Albany; lime and cement.

*Persbacher Bros. & Co., Calicoon; flagstones.

Warren Chemical Mfg. Co., New York; natural asphalt roofing material, roofing and roofs.

GROUP 48.— SALTS AND MINERAL PAINTS.

Battelle & Renwick, New York; double refined saltpetre.

Battelle & Renwick, New York; sulphur and brimstone.

*Clinton Metallic Paint Co., Clinton; hematite and mineral paint.

Nash, Whiton & Co., New York; dairy and table salt.

New York State Museum, Albany; paint.

New York State Museum, Albany; collective exhibit of mineral waters.

New York State Museum, Albany; collective exhibit of salt.

Roessler & Hasslacher, New York; collective exhibit of chemical products.

Roessler & Hasslacher, New York; Roessler & Edelman's desilvering process.

White, T. & S. C., New York; prepared rock, roll and ground sulphur.

Wyatt, Dr. Francis, New York; general collection of phosphates.

Wy. Central Association, Troy; sulphate and carbonate of soda.

GROUP 49.— METALLURGY.

Chrome Steel Works, Brooklyn; collection of products of chrome steel; welded 5-ply chrome steel plates.

Groups 50–54 inclusive treat of the metallurgy of baser metals in which New York had no exhibits.

Groups 55–57 treat of gold and silver metallurgy.

GROUP 55.

The Mechanical Gold Extractor Company, New York; the Crawford mill for pulverizing, etc., gold ores.

Roessler & Hasslacher Chemical Company, New York; cyanide of potassium for mining purposes.

GROUP 56.

Tiffany & Co., New York; collection illustrating the savings of gold and silver in jewelry shops.

GROUP 57.

Rand Drill Company, New York; furnace tapping drill.

GROUP 58.— STONE QUARRYING.

Ingersoll-Sergeant Drill Company, The, New York; Ingersoll track channeler, Ingersoll-Sergeant bar channeler, Ingersoll standard gadder for quarry work.

Rand Drill Company, New York; two shaft bars with clamps, three columns with arm and clamps.

GROUP 61.— DRILLING MACHINERY.

Ingersoll-Sergeant Drill Company, The, New York; adjustable tunnel column, clamp and crescent battery, automatic feed drill, drills and coal mining machines

Rand Drill Company, New York; rock drills and Derby bit little giant rock drills.

Rand Drill Co., New York; air compressing rock drills and other machinery.

Suydam, John, Albany; metal flexible joint.

GROUP 62.— MINING MACHINERY.

Gould Mfg. Co., Seneca Falls; deep mine pump.

Ingersoll-Sergeant Drill Company, The, New York; air head for rock drill, piston cold air compressor.

Rand Drill Co., New York; high pressure air compressor.

Rand Drill Company, New York; straight and duplex line air compressor.

Worthington, Henry R., New York; Lehigh mine pump, two central packed plunger pumps.

Worthington, Henry R., New York; one sinking pump, duplex plunger pump.

GROUP 63.— MOVING ORES AND COAL.

Andrews, W. C., New York; method of transportation by pumping coal through pipes.

Lancaster, J. H., New York; hoisting machine.

GROUP 66.— ASSAYING.

Douglas, James, New York; Douglas revolving calciner.

Kunz, Geo. F., New York; collective display, showing metallurgy of coinage.

Lipe, C. E., Syracuse; samples showing welding by fire.

Tiffany & Co., New York; collective exhibit of gold and silver alloys.

GROUP 67.— MINING LITERATURE.

Barber Asphalt Paving Co., New York; models of pavement.

Colo. Scientific Society, New York; volumes from 1883 to 1890.

Davis, Charles T., New York; "The Brick Maker."

Douglas, James, New York; models of revolving cylinders calcimining furnace with a central flue.

Goldthwaite, Wm. N., New York; Goldthwaite's Mineral Magazine.

Howard, Lockwood & Co., New York; "American Mail and Export Journal."

Kunz, Geo. F., New York; statistics and history of mining for gems and precious stones; portraits of mineralogists, geologists, gems, minerals, etc.; books and pamphlets on gems, precious stones and mining mineralogy.

Kunz, Geo. F., New York; book, gems and precious stones, North America.

New York State Museum, Albany; Natural History of New York.

New York State Museum, Albany; Bulletins of New York State Museum containing reports on iron, stone and salt.

Sanard, I. E., New York; "Coal Trade Journal."

Scientific Publishing Co., New York; the engineering and mining journals.

Standard Oil Company, New York; photographic transparencies, showing mining, transportation and refinement of petroleum.

Ward's Natural Science Establishment, Rochester; collection of relief models.

Williams, David, New York; "The Iron Age."

GROUP 68.— HISTORICAL IMPLEMENTS.

Kunz, Geo. F. (Tiffany & Co.), New York; historical implements; instruments, relics and medals.

Scientific Publishing Co., New York; book on (Vol. 1) Mineral Industry, its statistics, etc.

The foregoing list of awards to exhibitors from New York has been carefully compared with the records of this department and is correct.

F. R. GAMMON,

*March* 24, 1894. *Chief of the Department of Mines and Mining.*

# AWARDS GRANTED NEW YORK STATE EXHIBITS IN DEPARTMENT F, MACHINERY.

GROUP 69.— MOTORS AND APPARATUS FOR THE GENERATION AND TRANSMISSION OF POWER — HYDRAULIC AND PNEUMATIC APPARATUS.

Abendroth & Root Manufacturing Co., New York; spiral riveted pipes.

Abendroth & Root Manufacturing Co., New York; sectional water tube boiler.

American Leather Link Belt Co., New York; leather link belting.

Babcock & Wilcox Co., New York; model water tube boilers and details.

Ball & Wood Co., New York; high speed engines.

Buffalo Steam Pump Co., Buffalo; steam pumps.

Cameron Steam Pump Works, New York; pumps.

Carlson, Conrad, Brooklyn; platform and hod elevator.

Clonbrook Steam Boiler Works, Brooklyn; boilers.

Consolidated Safety Valve Co., New York; valves.

Conover Manufacturing Co., New York; independent steam engine condenser.

Davidson, M. T., Brooklyn; compound boiler feed pumps.

De La Vergne Refrigerating Machine Co., New York; refrigerating machinery.

Eddy Valve Co., Waterford; straightway valves for water and steam fire hydrants.

Electric Pipe Bending Co., Harrison; round, flat, oval and special forms of pipe coil.

Fasoldt, E. C., Albany; air compressors for physicians' use.

Floyd, James R., & Sons, New York; Ogden quick-moving valve for gas mains, self sealing mount piece, valve indicator.

The Fuel Economizer Co., Matteawan; flue heater to heat water for boilers.

Gould Mfg. Co., Seneca Falls; triplex power pumps for boiler feed.

Hunt, C. W., & Co., New York; steam engines, governors for steam hoisting engines.

Ingersoll-Sergeant Drill Co., New York; air compressor.

Knowles Steam Pump Works, New York; double acting triplex pump.

Lake Erie Engineering Works, Buffalo; 1,000 horse power vertical compound engine.

Lidgerwood Manufacturing Co., New York; hoisting engines for mine or contract service, bridge erection and in the operation of wire rope tramways.

Mathews, John, Apparatus Co., New York; carbonating machinery.

National Meter Co., Buffalo; gas engines, gas pumping engine.

New York Belting and Packing Co., New York; rubber belting, display of rubber packing, gaskets, balls, rolls, hose and tubing.

New York Safety Steam Power Co., New York; automatic cut-off engine.

Payne, B. W., & Sons, Elmira; improved Corliss engine.

Rand Drill Co., New York; air compressor.

Rider Engine Co., New York; hot air pumps for supplying water to residences, hotels, etc.

Thompson and Bushnell Co., New York; flue cleaner.

Turner Machine Co., New York; air compressors.

Watertown Steam Engine Co., Watertown; tandem compound condensing engine.

Westinghouse, Church, Kerr & Co., New York; upright tandem compound engines, single action high speed compound engine, collective exhibit of steam engines, steam loops.

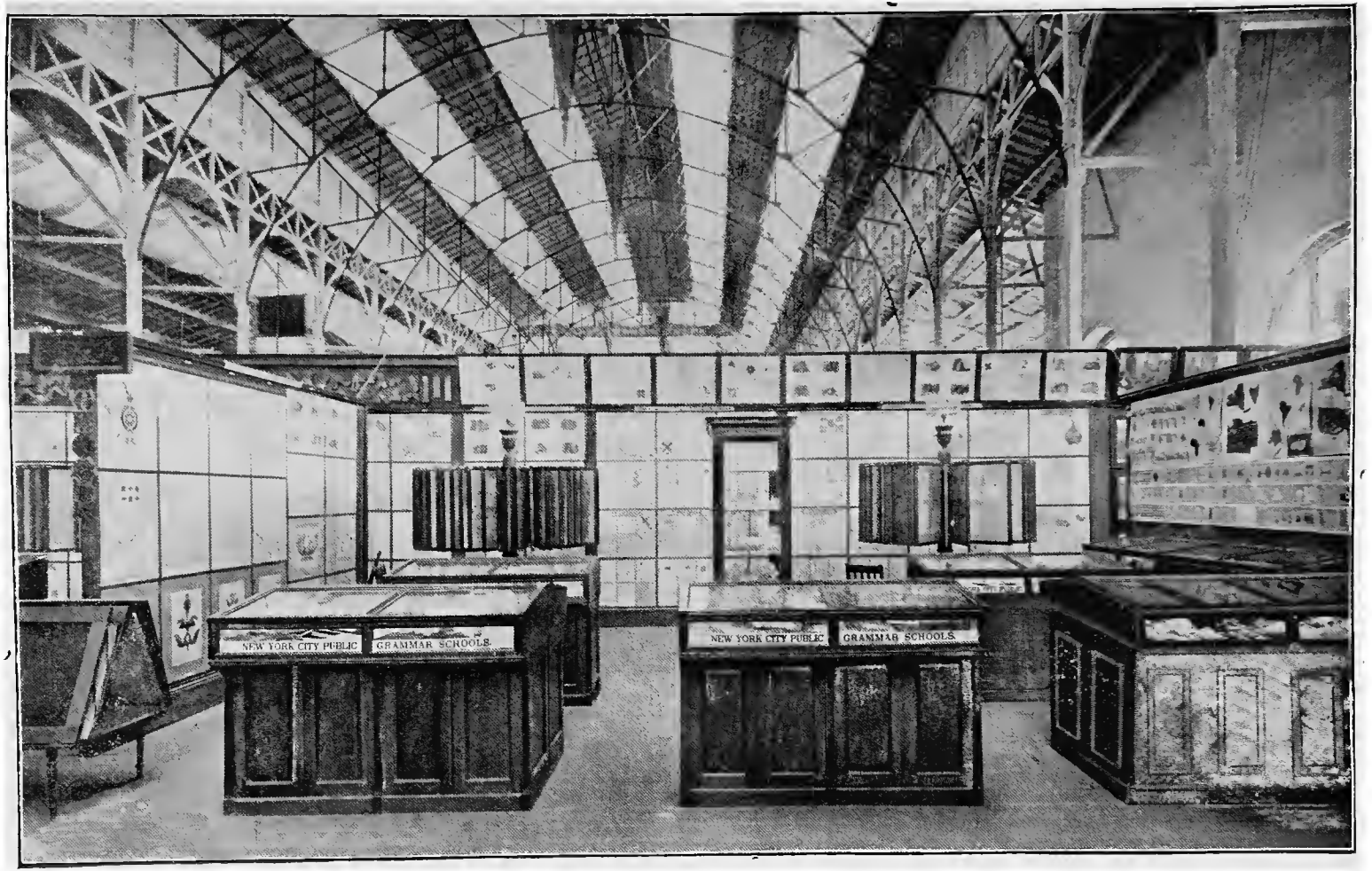
Wheeler Condenser and Engineering Co., New York; surface condensers.

Wing, L. J., & Co., New York; "Wing's" disc fan.

Wittemann Bros., New York; automatic continuous "spray system" carbonating apparatus.

Worthington, Henry R., New York; marine feed water heater, large check and foot valves for water, air compressor and beer racking pump, horizontal triple expansion engine, four-cylinder vertical triple expansion engine, vertical compound engine, underwriter's fire pumps, low duty pumps, admiralty feed pumps, wrecking pump, independent jet condenser and pumps, pressure pumps for mining and elevator service, ammonia pump, duplex water motor, steam accumulator combined with duplex pump, general exhibit of pumping machinery, high duty condensing engine.

Yawman & Erbe, Rochester; exhibit of bottle washing and rinsing machines, trucks and tanks.




ELEMENTARY SCHOOL ALCOVE

GROUP 70.— FIRE ENGINES — APPARATUS AND APPLIANCES FOR EXTINGUISHING FIRES.

American Fire Engine Co., Seneca Falls; Columbian steam fire engine, Clapp & Jones fire engine, Sillby steam fire engine, No. 15 steel house heater, rotary fire pump and piston fire pump, hose, pipes, firemen's tools, etc., Ahrens No. 20 size steam fire engine.

Waterbury Rubber Co., New York; spring armored hose.

GROUP 71. — MACHINE TOOLS AND MACHINES FOR WORKING METALS.

Bliss, E. W., Co., Brooklyn; power presses, seaming machines and gang slitters.

Capitol Machine Tool Co., Auburn; quick-acting vises.

Gleason Tool Co., Rochester; Gleason engine lathes.

Keystone Mfg. Co., Buffalo; patent nonpariel wrenches.

Manning, Maxwell & Moore, New York; machine tools and machines for working metals.

Morrill Bros., Brooklyn; drop hammer.

Niagara Stamping and Tool Co., Buffalo; machine tools.

Saunders, D., & Sons, Yonkers; machines for cutting and threading pipes.

Stiles & Parker Press Co., Brooklyn; punching presses and drop hammers.

Westcott Chuck Co., Oneida; scroll and drill chucks.

Williams, J. H., & Co., Brooklyn; forgings, wrenches.

GROUP 72.— MACHINERY FOR THE MANUFACTURE OF TEXTILE FABRICS AND CLOTHING.

Baker & Shevlin, Saratoga Springs; screens used in paper making.

Barton Mfg. Co., New York; rubber stamp vulcanizer.

Booth Bros., Rochester; turning and cording machines and upper shaper.

Lightning Beader Co., Springville; upper beading machines.

Manning, John J., New York; winding rolls for paper.

Singer Mfg. Co., New York; sewing machines for manufacturing purposes.

Tracy, Harriet Ruth, New York; Tracy lock and chain stitch rotary shuttle sewing machine.

GROUP 73.— MACHINES FOR WOOD WORKING.

American Wood Decorating Machine Co., New York; wood embossing machine.

Holmes, E. & B., Buffalo; No. 6 heavy timber planer and sizer, No. 6 improved Atlanta fast feed planer and matching machine, No. 9 endless bed double surfacer without feeding rolls, improved variable feeding device, segment resaw for resawing lumber and sawing sidings, straightening attachment, spur feed ripsaw, simple knife scales, barrel, keg, hogshead and stave machinery.

Prybil, P., New York; bevel hand-saw machine, swing-saw machine, piano plate drill press, piano butt machine, twist and fluting machine.

GROUP 74.— MACHINES AND APPARATUS FOR TYPESETTING, PRINTING, STAMPING, EMBOSSING, MAKING BOOKS AND PAPER WORKING.

American Box Machine Co., Amsterdam; slitting and winding machine, covering and trimming machine, top and bottom labeling machine, machine for making jewelers' boxes.

American Type Founders' Co., New York; specimens of job composition and type specimen books, Barth automatic type-casting and type-finishing machine, type, space and quadret-casting machine, Benton punch-cutting machine, Benton's self-spacing type, machinery and appliances for the manufacture of movable type.

Burrell, D. H., & Co., Poughkeepsie; automatic paper feeding machine.

Dexter Folding Co., Fulton; rapid side-feed book and newspaper folder.

Gally, M., New York; exhibit of universal job printing, embossing, paper box cutting and scoring presses.

Hoe, R., & Co., New York, quadruple web perfecting and insetting presses, stop-cylinder and lithographic power printing presses.

Iuman Mfg. Co., Amsterdam; automatic telescope paper box machine, cloth corner staying machine, inside scoring and slitting machine, strawboard cutting and scoring machine, corner cutting machine for manufacturing round-cornered paper boxes.

McAdams, John, & Sons, Brooklyn; ruling machine, paging machine.

Mergenthaler Linotype Co., New York; typesetting and casting machine for the production of metal bars with type faces in relief.

Potter Printing Press Co., New York; rotary web printing and folding presses for four and eight-page newspaper work, stop-cylinder lithographic presses.

Sheridan, T. W. & C. B., New York; Arch embossing machine, embossing and ink distributing machine, Sheridan paper cutter, Sheridan perfect gem hand lever, circular shear, automatic paper cutter, roller backer.

GROUP 75.— LITHOGRAPHY—ZINCOGRAPHY AND COLOR PRINTING.

Ottmann, J., Lithographing Co., New York; lithographing process.

GROUP 77.— MISCELLANEOUS HAND TOOLS, MACHINES AND APPARATUS USED IN VARIOUS ARTS.

Ashcroft Manufacturing Co., New York; pressure and vacuum gauges, Bean's standard die stock and Brown's adjustable pipe tongs, Tabor indicator, continuous recorder.

Clough & Maconnell, New York; wire corkscrew machine.

Doig, Wm. S., Brooklyn; box nailing machines.

Nathan Manufacturing Co., New York; injectors, lubricators, oil cups and attachments.

Schaffer & Budenberg, New York; pressure gauges, ammonia gauges for ice and refrigerating machinery, tachometers for high speed engines and steam engine indicators, injectors and exhaust injectors.

Sherwood Manufacturing Co., Buffalo; injectors, oil cups, oil pumps, lubricators, flue scrapers, gauge cocks, grease cup and flue blowers.

Thompson and Bushnell Co., New York; steam engine indicator.

Troy Laundry Machinery Co. (Limited), New York; mangles, washing machines, dampening, folding, drying, tumbling, starching and ironing machines; exhibition of model illustrating the construction of drying closets, etc.; duplex mangle machine; double-geared brass washing machine.

GROUP 78.— MACHINES FOR WORKING STONE, CLAY AND OTHER MATERIALS.

Caruss, J. H., & Co., New York; automatic lens-grinding machine.

Gouverneur Machine Co., Gouverneur; mill for sawing stone.

Mitchell, Cornelius S., New York; cherry heat welding compound.

Tabor Manufacturing Co., New York; duplex automatic molding machine.

GROUP 79.— MACHINERY USED IN THE PREPARATION OF FOOD, ETC.

Squier, Geo. L., Manufacturing Co., Buffalo; coffee mills, coffee hullers, coffee separators, pulpers and washers.

The foregoing list of exhibitors receiving awards in the machinery department from the State of New York, has been carefully compared with the records of this department and found to be correct.

*January* 30, 1894. M. L. McDONALD, JR.

# AWARDS GRANTED NEW YORK STATE EXHIBITS IN DEPARTMENT G, TRANSPORTATION.

## GROUP 80.— RAILWAYS.

Brooks, E. J., & Co., New York; car seal.

Brooks Locomotive Works, Dunkirk; collection of locomotives, "suburban" passenger locomotive.

Consolidated Car Heating Co., Albany; improved Commingler car system, direct steam heating, multiple circuit drum system and Sewall coupler.

Frost Veneer Seating Co., New York; veneer goods.

General Electric Co., New York; electric locomotives.

Hunt, C. W., Co., New York; industrial railroad system and conveyor.

Keller Printing Co., New York; tickets, ticket seller, ticket starting machine and cauceling apparatus.

Merchants Despatch Trans. Co., New York; refrigerator car.

Nathan Mfg. Co., New York; injectors, lubricators and appliances.

New York Air Brake Co., New York; air brake.

New York Central & Hudson River Railroad, New York; buffet car and day coach, model of old engine and trains; locomotive No. 999.

Ramapo Wheel and Foundry Co., Ramapo; boltless steel-tired wheels.

Safety Car Heating and Lighting Co., New York; Pintsch gas system, steam and hot water heating, Gibbs coupler.

Self Winding Clock Co., New York; train despatcher or program clock.

Schenectady Locomotive Works, Schenectady; switch engine, two locomotives.

Thacher Car Construction Co., New York; compressed air dumping car.

Wagner Palace Car Co., New York; vestibule train, model of car framing.

Worthington, Henry R., New York; tank pump and boilers.

## GROUP 81.— STREET CARS.

Jones', J. M., Sons, West Troy; body open electric car and body closed electric car.

Peckham Motor Truck and Wheel Co., Kingston; electric motor trucks.

Stedman, James H., Rochester; detective transfer.

Stephenson, John, Co. (Limited), New York; "Broadway" cable car, electric motor car.

## GROUP 82.— SPECIAL RAILWAYS.

Rankin, T. L., Sacketts Harbor; ice railway.

## GROUP 83.— ROAD VEHICLES.

Aubeuf, F. J., Oneida; hand cart and runners.

Barber Asphalt Paving Co., New York; traction indicator.

Brewster & Co.; New York; four-horse break, road coach, park drag, double suspension caleche, landau, pair-horse brougham, four-wheel gamecart, cabriolet, tandem cart, spider phaeton, top wagon, fancy sleigh, double suspension brougham.

Buffalo Spring Gear Co., Buffalo; vehicles in the white.

Cately & Ettling, Cortland; Burry prop spring.

Champion Wagon Co., Owego; Champion wagon.

Cook, Wm., New York; folding baby carriage.

Cunningham, Jas., Son & Co., Rochester; royal seven-spring rumble Victoria, royal brougham, glass landau, black hearse, white hearse, Berlin coach.

Curley, J., Brooklyn; family break, shell brougham, double-pillar brougham, top wagon, Victoria.

Dark, Thos., & Sons, Buffalo; garbage wagon.

Eccles, Richard, Auburn; carriage specialties.

Fenton Metal Mfg. Co., Jamestown; bicycle handle bar.

Flandreau & Co., New York; runabout.

Freeland & Bradley, Wellsville; patent carriage poles.

Geneva Carriage Works, Geneva; delivery wagon.

Glens Falls Buckboard Co., Glens Falls; buckboard wagon No. 1, buckboard wagon No. 5.

Mogul Mfg. Co., New York; draught springs for relief of animals.

New York Fifth Wheel Co., Brooklyn; anti-friction fifth wheel.

Peerless Mfg. Co., New York; bicycle sundries.

Remington Arms Co., Ilion; bicycles.

Rochester Wheel Co., Rochester; compressed band wheels.

Trades' News Publishing Co., New York; "The Hub."

Union Hardware Co., Union; coach and carriage forgings.

Whitney, Russell M., Olean; black birch wagon hubs.

GROUP 84.— OTHER FORMS OF TRANSPORTATION.

Otis Bros. & Co., New York; high pressure hydraulic elevator engine, standard hydraulic elevator, electric elevator (passenger), compound hoisting engine, electric passenger elevator, general exhibit of elevators.

Tracy, Harriet R., New York; model of passenger elevators.

Worthington, Henry R., New York; compound pumps for elevators.

GROUP 85.— WATER TRANSPORTATION.

Century Co., New York; drawings of modes of transportation.

Chase Elevator and Manton Windlass Co., New York; steam steerer and yacht windlass.

Continental Iron Works, Brooklyn; steel furnaces for marine boilers.

Coston Night Signal Co., New York; night signals for land and sea.

De Grauw, Aymar & Co., New York; oars.

Gas Engine and Power Co., New York; naphtha launches.

General Electric Co., New York; electric system for ships.

Harper Bros., New York; drawings of transportation subjects.

Hunt, G. W., Co., New York; rope, tubs and shovel.

Kahnweiler, David, New York; patent Woolsey buoy, life preservers, rafts and boats.

McBean, Edge & Co., Buffalo; set of fluted lens signal lamps, Fresnel lens signal lamps.

Merrill, R., & Son, New York; log compass and binnacle.

New York and New Jersey Sandy Hook Pilots, New York; models and pictures of pilot boats.

New York State Exhibit, Albany; relief map and model of lock.

Nicarauga Canal Construction Co., New York; relief model of Nicarauga canal.

Pain, Jas., & Son, New York; pyrotechnics for ships' use.

Providence and Stonington S. S. Co., New York; models, pictures and books.

Rushton, J. H., Canton; collection of boats, canoes and oars.

Safety Car Heating and Lighting Co., New York; gas lighted buoys.

Smith & Stanton, New York; pen drawings of steam vessels.

Spanish Transportation Co., New York; general exhibit, model of S. S. "Pillafo."

Turner, J. Spencer, New York; Ontario cotton sail duck.

Webb, J. Beavor, New York; model of yacht.

The foregoing list of awards to exhibitors from New York has been carefully compared with the records of this department, and is correct.

*March* 26, 1894.

F. R. GAMMON,
*Chief of Department of Transportation.*

ELEMENTARY SCHOOL ALCOVE

# AWARDS GRANTED NEW YORK STATE EXHIBITS IN DEPARTMENT H, MANUFACTURES.

GROUP 87.— CHEMICAL AND PHARMACEUTICAL PRODUCTS.

Cheesebrough Manufacturing Co., New York; vaseline, products of petroleum, toilet soaps, grease paints, boot and shoe pastes.

Dodge & Olcott, New York; essential oils, drugs, chemicals for perfumery.

Durkee, E. R., & Co., New York; flavoring extracts and essences.

Fritzsche Bros., New York; essential oils.

Fritzsche Bros., New York; chemicals.

Gardners' Co., New York; syrup hydriodic acid.

Gribble & Nash, New York; refined camphor.

Hotchkiss, N. G., & Sons, Lyons; essential oils.

Ladd & Coffin, New York; handkerchief perfumes, cologne, toilet waters.

Ladd & Coffin, New York; perfumery, artistic display.

Lazell, Dalley & Co., New York; domestic perfumery, toilet water, sachet powder.

Low's, Robert, Son (Limited), Brooklyn; toilet soaps.

Marx & Rawolle, New York; glycerine

Ricksecker, Theo., New York; perfumery, toilet soaps.

Roessler & Hasslacher Chemical Company, New York; chemicals, ceramic colors, fire gold.

GROUP 88.— PAINTS, DYES, ETC.

Caws Ink & Pen Co., New York; writing ink.

Egyptian Lacquer Manufacturing Co., The, New York; lacquers, lacquers for metal.

Hebbenwhite Manufacturing Co., Buffalo; stove polish.

International Ultramarine Works (Limited), New York; ultramarine blue.

Johns, H. W., Manufacturing Co., New York; paints, colors, wood stains.

Miller, The Frank, Co., New York; harness dressing, oils, blacking, fly net dressing, axle oil and carriage dressing.

GROUP 89. — TYPEWRITERS, PAPER, STATIONERY.

American Paper Pail and Box Co., New York; folding paper boxes.

Arabol Mfg. Co., New York; pastes.

Bartholemae, H., & Co., New York; wall paper.

Beck, Frederick, & Co., New York; wall paper.

Beck, Frederick, & Co., New York; pressed wall paper hangings with silk face, Lincrusta Walton.

Blickensderfer Mfg. Co., New York; typewriting machines.

Blickensderfer Mfg. Co., New York; small typewriting machines.

Book Typewriter Co., Rochester; Book typewriter.

Crandall Machine Co., Groton; typewriter copy holder.

Columbia Typewriter Mfg. Co., New York; the bar lock typewriter.

Cyclostyle Co., New York; the Neostyle duplicating apparatus, the Cyclostyle, the Neostyle stand, cabinet and process of duplicating typewriting.

Franklin Mfg. Co., Rochester; lumber, oil and lithographic crayons.

Graves, Robert, & Co., New York; wall paper.

Hake, Ph., Mfg. Co., New York; ball programmes, party and wedding invitations.

Little, A. P., Rochester; American impression books, typewriter carbons.

National Wall Paper Co., New York; artistic pavilion of National Wall Paper Co.

National Wall Paper Co., New York; wall paper, Lincrusta Walton, artistic display.

Nevius & Haviland, New York; wall paper.

Office Specialty Mfg. Co., Rochester; letter files, document files, cabinets, rapid roller copier, metallic vault furniture.

Parks, Anna M., Albany; perforating machine.

Rogers Manifold and Carbon Paper Co., New York; manifold paper, carbon paper, typewriter ribbons.

Rogers Manifold and Carbon Paper Co., New York; stylus.

Rockwell & Rupel Co., Rochester; typewriter ribbons, light office supplies.

Shattuck Pen Co., New York; fountain pens.

Smith, S. F., & Co., New York; typewriter supplies.

Standard Paint Co., New York; insulating waterproof paper.

Thompson-Norris Co., Brooklyn; corrugated paper.

Tiffany & Co., New York; fine stationery, writing paper, cards.

Warren, Fuller, & Co., New York; wall paper.

Waterman, L. E., & Co., New York; Ideal fountain pens.

Wells Mfg. Co., Syracuse; cabinet letter files.

Williams Typewriter Co., Brooklyn; type writers, check punches.

## GROUP 90.— FURNITURE.

Associated Artists, New York; color study, fighting dragons, woven.

Associated Artists, New York; gold embroidered portiere, Japanese wall hanging embroidered, gold embroidery on cloth.

Associated Artists, New York; needlework tapestry (Algerian boy), textiles, shadow silk.

Bach, Mrs. Isaac, New York; cover inlaid with cloth.

Buffalo Brass and Iron Bedstead Co., Buffalo; iron bedstead.

Herts Brothers, New York; furniture, decorations, draperies.

Jansen, Edward, New York; apartments with walls and ceilings decorated, apartments furnished complete, reed and rattan furniture.

Klaber, S., & Co., New York; mantels, tables, cabinets, pedestals.

Keith, Dora Wheeler, New York; library ceiling.

Keith, Dora Wheeler, New York; tapestry needlework (Birth of Psyche), color study in darned embroidery, needlework tapestry (Twilight).

Lyman, Anna, New York; picture, panel in needlework, tapestry azalia curtain.

Marks Adjustable Folding Chair Co., New York; five adjustable folding chairs.

Neal, Sarah C., New York; portable crib.

Nevius & Haviland, New York; shade roller.

Sargent Mfg. Co., New York; revolving book case, book racks.

Schlesinger, Wiessner & Co., New York; wash stands, settees, chairs, child's chair, tables, invalid chairs.

Schwarzwaelder, Wm., New York; seven roll-top desks.

Singer Mfg. Co., New York; sewing machine cabinets, sewing and embroidery, artistic furnishings, upholstering.

Smith, B. & W. B., New York; wall and counter cases, counters, specialties in bent glass cases, office and store furniture.

Sypher & Co., New York; sixteenth century tapestries, cabinet with porcelain placques, rare specimens of sixteenth and seventeenth century carved oak furniture, antique porcelain.

Tiffany Glass and Decorating Co., New York; part of a suite of furniture, inlaid table of wood and pearl, church banner, vestments, mitre and cape, a new way of making doors of metal and glass, a new mantel hood, a dark room and a light room furnished and decorated, a table of oak, a table of wood and pearl, doors of metal and glass, colored glass windows for domestic use, two ceilings, one dark and one light.

Tiffany Glass and Decorating Co., New York; furnishings and glass works, domestic and ecclesiastical decorations, memorials, chairs of new design never before used in furniture.

Tiffany Glass and Decorating Co., New York; portieres of leather decorated with metal printed curtains.

Wheeler, Mrs. Candace, New York; decorations and furnishings for library.

Wheeler, Mrs. Candace, New York; brocades.

## GROUP 91.— CERAMICS AND MOSAICS.

Burlock, Mrs. F. A., New York; plates, bonbonnieres, rose jar.

Celadon Terra Cotta Co., Alfred Center; roofing and siding tiles, terra cotta.

Cook, Miss S. E., Waterloo; rose jar, trays.

Dexter, Mrs. E. A., New York; after dinner coffee pot.

Dwight, Minnie T., New York; decorated china.

Garbarino, Clotilde, New York; fish plates.

Onondaga Pottery Co., Syracuse; translucent china.

Richard, Mrs. C. F., Buffalo; painted china.

Tiffany Glass and Decorating Co., New York; tesseræ hood for mantel, picture panel of Pan, fireplace, mantel, etc.

## GROUP 92.— MARBLE MANTELS, ETC.

Tiffany Glass and Decorating Co., New York; a mantel in marble (mosaic metal), baptistry pulpit, marble and mosaic altar in marble and gold, candlestick of Connemara.

GROUP 93.— ART METAL WORK.

Emerson, Miss S. H., New York; Normandy copper jug, brass jar with cover.

Power, Maurice J., New York; bronze statues, bronze reliefs, bronze busts.

Tiffany & Co., New York; niello work, Champ leve enamels.

Tiffany Glass and Decorating Co., New York; tabernacle door in gold filagree, two table lamps in gold and copper filagree, hanging lamps, two altar crosses in gold, candlesticks.

Van Kuyck, Miss Pauline, New York; photo frame, repoussé work.

GROUP 94.— GLASS AND GLASSWARE.

Hoare, J., & Co., Corning; glassware, rock crystal cutting, cut glass, engraved glass.

Strauss, L., & Sons, New York; artistic display of cut glassware, collective display of cut glassware, candelabra twelve feet high of cut glass, Columbus punch set (cut glass), large drug bottles (cut glass), epergnes.

Tiffany Glass and Decorating Co., New York; reredos panel, mosaic in glass, altar, reredos, pedella.

GROUP 95.— DECORATIVE STAINED GLASS.

Tiffany Glass and Decorating Co., New York; lectern, picture panel, pulpit, church windows of American glass, domestic colored glass windows.

GROUP 96.— CARVING.

Tiffany & Co., New York; glass sculptured, engraved, mounted in silver; metal carvings; chiseling in gold and silver; ornamental, carved and stained ivory.

Tiffany Glass and Decorating Co., New York; two tables, chairs and settee; sculptured and engraved table lamp.

Vanderpoel, Mrs. E. N., New York; carved box.

GROUP 97.— GOLD AND SILVERWARE.

Diepenbrock & Uchtman, New York; gold and silk embroidered church vestments, military and society banners.

Diepenbrock & Uchtman, New York; military and society flags.

Manhattan Silver Plate Co., Lyons; electroplated gold hollow ware.

Manhattan Silver Plate Co., Lyons; electroplated gold and silverware, hollow ware.

Manhattan Silver Plate Co., Lyons; artistic display.

Tiffany & Co., New York; silver table ware, plates, salvers, candelabra, gold and silverware, gilt ware for table decorations, knives, forks and spoons, fancy articles, silver spoons, cane heads, mixed metals, moxumi inlaid enameled, plated ware on hard nickel silver base.

Tiffany & Co., New York; damascening of gold and silver on iron, etching on decarbonized steel.

GROUP 98.— JEWELRY.

Bell & Barber, New York; pyrites jewelry and ornaments.

Brown's Amber Mfg. Co., New York; amber jewelry, pipe and cigar holders.

Brown's Amber Mfg. Co., New York; bric-a-brac.

Canini, J. A., Saratoga Springs; jewelry, mosaic jewelry, gold, silver with turquoise, coral jewelry.

Favre, Leon, New York; ivory miniatures

Tiffany & Co., New York; gold ornaments, rings, chains, bracelets, necklaces, diamonds, colored gems, rubies, sapphires fancy stones, diamond cutting, rubies and fancy stones, agate, jade, rock crystal.

GROUP 99.— HOROLOGY.

Bundy Mfg. Co., Binghamton; automatic time recorder.

Bundy Mfg. Co., Binghamton; watchman's electric clock.

Self Winding Clock Co., New York; self-winding clocks, method of time distribution by electricity, electric chimes in church tower.

Self Winding Clock Co., New York; automatic signal clocks, sub-marine clocks, self-winding marine striking movement, self-winding synchronizing clocks

Tiffany & Co., New York; watch cases, clocks, astronomical time keepers.

GROUP 100.— SILKS.

American Silk Label Co., New York; woven labels and book marks.

Blumenthal, A. S., New York; silk ribbons.

Castle Braid Co., New York; braids, covered buttons, dress trimmings, silk cords.

Cutter, John D., & Co., New York; spool silks, plain dress silks, fancy dress silks.

Dexter, Lambert & Co., New York; dress silks, silk ribbons.

Doherty & Wadsworth, New York; silk ribbons, dress goods, crêpes.

Elwood, B. E. & E., Fort Plain; silk dress goods.

Empire Silk Co., The, New York; silk dress goods.

Hamil & Booth, New York; figured silk dress goods.

Hitchcock & Meding Co., New York; satin damask, brocatelles, ribbons, dress and tie silks.

Hitchcock & Meding Mfg. Co., New York; silk grenadines, silk nun's veils.

Jennings Lace Works, The, New York; laces, gloves, mitts and veils.

Johnson, Cowdin & Co., New York; silk ribbons.

Kayser, Julius, & Co., New York; mitts, gloves.

Levy Brothers, New York; silk ribbons.

Liberty Silk Co., New York; dress silks.

Pelgram & Mayer, New York; dress silks, silk ribbons.

Redmond, Flora V., New York; thirteen samples printed silks.

Rhenania Mills, College Point; silk velvet ribbons.

Robertson, Wm., New York; upholstery silks, silk curtains.

Stearns, John N., & Co., New York; figured and plain silks.

Strange, Wm., Co., New York; silk ribbons, dress goods, serges, linings

Sutro Bros. Braid Co., New York; trimming braid.

Trevor, Wm., New York; silk cravats, silk ties, silk handkerchiefs.

GROUP 101.— VEGETABLE FABRICS.

Johns, H. W., Mfg. Co., New York; asbestos material, roofing sheathing, steam pipe and boiler coverings, packing cloth, cement.

Pantasote Leather Co., New York; upholstery.

Pantasote Leather Co., New York; pocket books, screens, friezes and dados, substitute for mural work.

Potter, Thos., Sons & Co., New York; oil cloths, linoleums, light weight oil cloth.

Tannette Mfg. Co., New York; leather imitations for furniture, wall decorations and carriages.

GROUP 102.— COTTONS AND LINENS.

Garner & Co., New York; printed cotton goods, calicoes, percales, lawns.

Garner & Co., New York; ducks, sateens and Henriettas, turkey red prints.

Downer, Lisa De F., New York; linen table cloth spun in 1892.

New York Mills, The, New York; New York Mills extra improved primus interpares challenge cottons; shirtings of superior quality and evenness of thread and manufacture; New York Mills extra heavy sheetings, superior quality, weight and evenness of manufacture; New York Mills camlet jean, color and quality (for southern use), for men and women; cassimeres, superior quality, design and color (for men's wear); twilled jeans, jeans for drawers, shirtings, ginghams, cotton goods.

Singer Manufacturing Co., New York; curtains.

Standard Oil Co., Troy; lamp, stove and torch wicks.

Thompson, James, & Co., New York; twines, buckram.

GROUP 103.— WOOLEN GOODS.

American Loop Fabric Co., Brooklyn; blankets, carriage and steamer robes, traveling rugs, horse blankets, afghans.

Allen, L. L., & Bros., Rochester; dress goods, linings.

Allen, L. L., & Bros., Rochester; flannels.

Appleton Woolen Mills, Appleton Mills; paper makers, felts, cassimeres.

Auburn Woolen Co., Auburn; woolen cloth.

Conde, Switz, New York; knitting fabrics, knitting novelties.

Canoga Woolen Co., Auburn; woolen cloth.

Dolge, Alfred, Dolgeville; felt goods; boots, shoes and slippers made of same.

Empire Woolen Mills, Clayville; woolen cassimeres, worsted coatings and suitings.

French & Ward, New York; eider-down blankets, eider-down fabrics.

NORMAL SCHOOLS — ELEMENTARY SCHOOLS

Globe Woolen Co., Utica; worsted coating and suitings, beavers, cassimeres.

Jaeger's, Dr., Sanitary Woolen System Co., New York; underwear, wearing apparel, blankets, bedding.

McFarland Co., The, Amsterdam; woolen knit underwear.

Waterloo Woolen Mills Co., Waterloo; broadcloths.

Waterloo Woolen Mills Co., Waterloo; woolen shawls.

## GROUP 104.—CLOTHING AND COSTUMES.

Alder, Jacob, & Co., New York; gloves.

Allen, John C., Gloversville; kid gloves, mittens.

Altman Summer Neckwear Co., New York; summer neckwear.

Bastable & Mannigan, New York; overcoats.

Beatty, C. F., New York; gold metal leaf.

Brill Brothers, New York; dress shirts.

Brooklyn Shield Co., Brooklyn; dress shields.

Burt, Edwin C., & Co., New York; boots, shoes and slippers.

Cluett, Coon & Co., Troy; general exhibit of collars, cuffs and shirts.

Curtis, H. C., Co., Troy; collars, cuffs, shirts.

Delsarte Corset Co., New York; children's waists, bust corsets.

Dempster & Place, Gloversville; gloves.

Dempster & Place, Gloversville; mittens.

Doll, Edwin N., New York; Tuxedo coat, silk vest.

Dryfoos, L., & Co., New York; silk shirts.

Excelsior Fur and Glove Sewing Machine Co., New York; sewing machines for gloves.

Ford, C. P., & Co., New York, welts, shoes.

Foster, Paul & Co., New York; artistic display.

Foster, Paul & Co., New York; kid gloves.

Gardner, John, Brooklyn; shoes and slippers.

Haley, C. J., & Co., New York; hose supporters.

Hanan & Son, New York; boots and shoes.

Harvey Fastening Co., New York; overgaiter fastener.

Hoople, Wm. Howard, New York; strip welting.

Howard, J. Imogen, New York; handmade children's dresses.

Hull & Co., Poughkeepsie; pantaloons.

Hull & Co., Poughkeepsie; process of manufacture from the raw wool to the finished trousers.

Jaros Hygienic Underwear Co., New York; hygienic underwear.

Knox, E. M., New York; silk hats, stiff hats, soft hats.

Knox, E. M., New York; straw hats.

Knox, E. M., New York; ladies' riding hats, napper hats.

Lattemann, J. J., Shoe Mfg. Co., New York; boots.

Lehmann, Chas. F., Brooklyn; military helmets of cork, police helmets of cork, society helmets of cork.

Mayer, Strouse & Co., New York; corsets.

Merwin, Berkley R., New York; cutaway frock suit, sack suit, Tuxedo suits.

Millen, E., & Co., New York; pajama suits, fancy night shirts.

Millen, E., & Co., New York; dress shirts.

Mills, S. J., Rochester; dress waists of silk.

Mitchell, John J., The, Co., New York; fashion plates of men's garments.

Muller, A. F., New York; ladies' riding habits.

Northrup Glove Co., Johnstown; gloves.

Patterson, John, & Co. New York; queens', state, grooms' and waiters' livery.

Self Threading Sewing Machine Co., New York; sewing machines.

Seybel, F. W., New York; ladies' felt hats, ladies' straw hats.

Siegel Brothers, New York; ladies' muslin underwear.

Singer Mfg. Co., New York; machines, Singer machines with reciprocating shuttle movement, Singer sewing machine oscillating movement, Singer sewing machine single thread chain stich.

Stiehl, C. H., & Co., New York; children's headwear.

Tracy, Harriet R., New York; sewing machine products.

Tracy, Harriet R., New York; sewing machines.

Twyeffort, E., New York; morning hunting coat, waistcoat, breeches.

United Shirt and Collar Co., Troy; ladies' collars, cuffs, shirts and chemisettes.

Van Orden Corset Co., New York; corsets.

Van Orden Corset Co., New York; manufactured corsets.

Vredenburgh & Brooks, New York; D. B. frock coat, D. B. waistcoat, trousers.

Weiss, Julius C., & Co., New York; dress suit, driving overcoat.

Wessman, J. P., New York; overcoat.

Williams Mfg. Co., Plattsburgh; sewing machines for family and light manufacturing.

### GROUP 105.— FURS.

Gunther's, C. G., Sons, New York; manufactured furs, manufactured skins, mounted animals, stuffed animals, trimmings, caps, boas, muffs, capes, robes, rugs, Russian sable tail garment, eagle banner, natural beaver robe, ermine cloak.

Gunther's, C. G., Sons, New York; hunters' and sportsman's furs, broad tail mantellette, chinchilla mantellette.

Shayne, C. C., New York; furs.

Shayne, C. C., New York; sable mantle, mink mantle.

Treadwell, Geo. C., & Co., Albany; dressing for seal furs, dyeing for seal furs, capes.

### GROUP 106.— LACES, EMBROIDERIES, ETC.

Associated Artists, New York; tapestry.

Associated Artists, New York; color study, portiere, etc.

Associated Artists, New York; Japanese wall hanging, gold embroidery on gold cloth.

Associated Artists, New York; tapestry needlework ("Algerian Boy"), textiles, group of shadow silks.

Associated Artists, New York; cotton velvets.

Carter, Mrs. Esther, New York; Flemish lace curtain (white), Venetian trimming for scarf.

Clark, H. P., Springfield Centre; embroidery.

Cole, Miss Agnes, New York; ecclesiastical and other embroidery.

Crotty & Mitchell, New York; dress stays.

Decorating Artists, Society of, New York; bed-spread, Italian, etc., Renaissance; panel, head of Madonna, solid embroidery in silk.

Decorating Artists, Society of, New York; gold embroidery, velvet bags.

Downer, Mrs. Frederick W., New York; hand-made lace scarf.

Excelsior Quilting Co., New York; fancy stitchings and quiltings of linings.

Gerschal, Victor, New York; pearl buttons.

Gibson, S. Meta, New York; art needlework.

Hampton, Mrs. Henry, Poughkeepsie; yellow roses, center piece, linen.

Hadley, Sara, New York; hand-made lace.

Hollingsworth, Mrs. J., Penn Yan; table cover.

Howard, J. Imogen, for Afro-American exhibit of New York State Board; ecclesiastical and other embroidery.

Hiller, M. L., & Sons, New York; shoe trimmings.

Keith, Dora Wheeler, New York; tapestry needlework ("Birth of Psyche").

Kreamer, T. R., Steinway; art embroidery and painting.

Lamb, J. & R., New York; frame with ecclesiastical embroidery.

Lyman, Anna, New York; picture panel in needlework, etc.

New England Whalebone Mfg. Co., New York; stays.

New England Whalebone Mfg. Co., New York; dress bones.

New York State Board of Women Managers, New York; collection of miniatures.

Nichols, Rhoda Holmes, New York; piece of hand-made lace.

Ogden, Miss Lucy, New York; embroidery.

Peters, Mrs. M. A., New York; shore piece embroidered on satin.

Petit, Julie Emma, New York; crochet spread and shams.

Preston, Mrs. R. W., Brooklyn; crochet counterpane brown thread, crochet pillow cover.

Ryerson, Miss N. C., New York; tapestry, "Summer."

Singer Mfg. Co., The, New York; laces, art embroidery, needlework, tapestries, machine work.

Stevens, Mary D., New York; frame with embroidered angel.

Tiffany Glass and Decorating Co., New York; lectern work, embroidering in gold and silks, leather table cover of perforated embroidery, precious mitre in needlework applique.

Tiffany Glass and Decorating Co., New York; orphreyed mitre in pure needlework of gold, chasuble in gold applique, cape of velvet and embroidery.

Wheeler, Mrs. Candace, New York; brocades.

### GROUP 107.— TOILET ARTICLES.

India Rubber Comb Co., New York; combs, brushes.

### GROUP 108.— TRAVELING EQUIPMENTS.

DeMuth, Wm., & Co., New York; smokers' articles, meerschaum pipes mounted with amber, metal show figures.

DeMuth, Wm., New York; artistic display of pipes and smokers' articles.

Hacker, J. C., New York; bags.

**Tiffany & Co.**, New York; umbrellas, canes, fancy bags, pouches, card cases, portfolios, silverware and jewelry cases, valises, dress suit cases, hand bags, toilet articles, leather of animals, birds, reptiles, fishes.

GROUP 109.— RUBBER GOODS.

The India Rubber Comb Co., New York; hard rubber goods, soft rubber goods.

GROUP 110.— TOYS AND FANCY ARTICLES.

Estes, E. B., & Sons, New York; turned wooden boxes.

Jansen, Edward, New York; novelties in basket work, reed chairs, tables, stools and ottomans, rattan chairs, stools and ottomans.

Pia, Peter F., New York; pewter toys.

Rice & Hochster, New York; tortoise shell articles.

GROUP 111.— LEATHER GOODS.

Barnet, J. S., & Bro., New York; finished leather.

Fayerweather & Ladew, New York; belting and sole leather.

Hauselt, Chas., New York; glazed kid.

Johnstone & Buckley, New York; welting and welting leather.

Levor, Gustav, Gloversville; patent shoe kid.

Moffat, David, & Co., New York; harness leather.

Weed, James B., & Co., Binghamton; finished leather.

GROUP 112.— SCALES AND MEASURES.

Buffalo Scale Co., Buffalo; combination beam for hay scales, Dormant scales, reverse acting meat beam, Columbian scale, Boston platform, fancy latch for platform scales, patent Boston market scales, patent testing machine.

National Meter Co., Brooklyn; water meters.

Neptune Meter Co., New York; water meters.

Springer Torsion Balance Co., New York; scales and balances.

Thomson Meter Co., Brooklyn; water meters.

Worthington, H. R., Co., New York; water, oil and molasses meters.

GROUP 113.— MATERIAL OF WAR.

Bannerman, Francis, New York; repeating shot guns and rifles, riot guns.

Burgess Gun Co., Buffalo; sporting and hunting firearms.

Emerson, Chas. H., Whitehall; boomerang.

Lefever Arms Co., Syracuse; automatic hammerless guns.

Lefever Arms Co., Syracuse; ejector.

Remington Arms Co., Ilion; military and sporting firearms.

GROUP 114.— LIGHTING APPARATUS.

Hohenstein, H., New York; candles and sundries, lamp and candle shades of silk, linen and paper.

Rochester Lamp Co., New York; lamps, lamp shades and appurtenances, artistic display.

Steam Gauge Lantern Co., Syracuse; lamps, lanterns.

Tiffany Glass and Decorating Co., New York; sanctuary lights of silver and copper, of new and artistic design; a metallo-mother of pearl electrolier, novel in form and artistic in design; a church electrolier of great size, glass and metal.

GROUP 115.— HEATING AND COOKING APPARATUS.

Abendroth Brothers, New York; hot water heaters.

Consolidated Car Heating Co., Albany; electric heaters.

Cortland Howe Ventilating Stove Co., Cortland; heating stoves.

Downer, Lisa de Forest, New York; patent mop pail.

Gorton & Lidgerwood Co., New York; house heating boilers.

Howard Thermostat Co., Syracuse; automatic damper regulators.

Iron Clad Mfg. Co., New York; anti-burning bottom for sheet metal kitchen utensils, galvanized articles for household purposes, rotary ash sifter.

Jackson, E. A., & Bros., New York; grates.

Kelsey Furnace Co., Syracuse; warm air furnace.

Lawton, Mrs. J. M., New York; maize grater.

Pease, J. J., Furnace Co., Syracuse; hot water furnaces, hot air and steam heaters.

Ronalds & Co., New York; range boilers.

Stroud, James, New York; self-basting roasting pans.

Troemner, Henry, New York; coffee mills.

Tuttle & Bailey Mfg. Co., New York; warm air registers, ventilators.

Warner, J. W., Oneida; hot water heaters, steam heating boilers.

GROUP 116.— METAL WARE.

Iron Clad Mfg. Co., New York; tinned, galvanized and enamelled household or kitchen steel soda fountains, rotary ash sifters, utensils, cold handles.

Iron Clad Mfg. Co., New York; soda fountains, enamelled sheet metal ware.

Mathews, John, App. Co., New York; soda water apparatus and all fixings.

GROUP 117.— WIRE GOODS.

Tiffany Glass and Decorating Co., New York; glass and metal lathe work for windows, etc.

GROUP 118.— WROUGHT IRON GOODS.

Bayer & Soherbner, New York; wrought iron grills, audirons.

Tiffany Glass and Decorating Co., New York; wrought copper lamp, fire screen, wrought silver lamp.

GROUP 119.— HARDWARE, SAFES, ETC.

Bardsley, James, New York; spring hinges and door knobs.

Bohannan, Wilson, Brooklyn; locks, padlocks, switch locks, door locks, handles and night latches.

Bommer Bros., Brooklyn; spiral spring hinges.

Cary Safe Co. (Limited), Buffalo; safes.

Jennings, C. E., & Co., New York; augers, bits, drawing knives, saws, planes, carpenters' tools.

Kearney & Foot Co., New York; files and rasps.

Maydole, David, Hammer Co., Norwich; hammers.

Stafford, N., Norwich; Stafford coin registering bank.

GROUP 120.— PLUMBING AND SANITARY MATERIALS.

Alberene Stone Co., New York; Alberene stone laundry tubs, sanitary and plumbing specialties.

Iron Clad Mfg. Co., New York; riveted galvanized range boilers, welded galvanized boilers (range).

Oswego Indurated Fibre Co., Oswego; laundry trays, bath tubs, sinks and lavatories made of indurated fibre ware.

Stewart Ceramic Co., New York; solid white crockery, stationary wash tubs, bath tubs.

GROUP 121.— MISCELLANEOUS.

Campbell Cutlery Co., Syracuse; display trays.

Cushman & Denison, New York; pocket files.

Dostie, Mrs. G. W., Johnstown; dress cutting system.

Improved Cloak Rack Co., New York; revolving cloak stand.

Iron Clad Manufacturing Co., New York; sheet metal tubular or hollow rives.

McDowell Co., The, New York; small brass machine for drafting garments to take the place of tailor square.

McDowell Co., The, New York; small machine for drafting men's garments.

Major, A., Cement Co., New York; leather and rubber cement.

North American Phonograph Co., New York; phonographs.

Palmenberg's, J. R., Sons, New York; display of fixtures and forms.

Queen Silver Polish Co., New York; silver polish.

Rodwell Manufacturing Co., Buffalo; stamps and gilded sign letters.

Safford, N., Buffalo; signs.

Tiffany & Co., New York; medals struck by Tiffany.

Tiffany Glass and Decorating Co., New York; church furniture of all kinds in marble, plaster, metal, etc., a statue of Blessed Virgin, etc.

The foregoing list of awards to exhibitors from New York has been carefully compared with the records of this department and is correct.

F. R. GAMMON,

*March* 24, 1894. *Chief of the Department of Manufactures.*

WORKINGMAN'S SCHOOL — NORMAL SCHOOLS

# AWARDS GRANTED NEW YORK STATE EXHIBITS IN DEPARTMENT J, ELECTRICITY.

GROUP 122.— ILLUSTRATIVE APPARATUS.

General Electric Co., New York; class 760 — Transformers.

Waite & Bartlett Manufacturing Co., New York; class 757 — Holtz induction machine.

GROUP 123.— MEASURING APPARATUS.

General Electric Co., New York; class 764 — Recording wattmeter, Thomson.

Greeley, E. S., & Co., New York; class 761 — Electrical testing instruments.

GROUP 124.— BATTERIES.

Bunnell, J. H., & Co., New York; class A — Standard dry battery.

Edison Manufacturing Co., New York; class A — Edison La Lande battery.

Greeley, E. S., & Co., New York; class A — Exeter dry battery.

Leclanche Battery Co., The, New York; class A — Batteries for open circuits (volt and cylinder cells).

Vetter, J. C., & Co., New York; class A — Dry Leclanche battery.

GROUP 125.— DYNAMICAL ELECTRICITY.

Excelsior Electric Co., New York; class 766 — Dynamos, direct constant current, for series arc lighting.

General Electric Co., New York; class 765 — Dynamos and motors, direct current, constant potential; class 766 — Dynamos, direct constant current, for series arc lighting; class 767 — Dynamos, alternating current, constant potential.

GROUP 126.— TRANSMISSION OF CURRENT.

Brixey, W. R., New York; class 769 — *a.* Insulated wires, high grade; *b.* Rubber insulating tape.

Electrical Conduit Co., New York; class 771 — Underground conduit for electrical wires.

General Electric Co., New York; class 769 — *a.* Eccentric coil ammeter; *b.* Astatic bar ammeter; class 770 — *a.* Lightning arresters, Thomson. *b.* Automatic circuit breaker; class 771 — Underground electric tube system.

India Rubber Comb Co., New York; class 769 — Hard rubber insulating material.

Interior Conduit & Insulating Co., New York; class 769 — Snap switches; class 771 — Complete system for interior conduits for electrical wires.

Johns, H. W., Manufacturing Co., New York; class 769 — Insulating materials (vulcabeston and moulded mica).

New York Insulated Wire Co., New York; class 769 — Insulated wires (high grade).

Norwich Insulated Wire Co., New York; class 769 — Wire insulated with paper.

Okonite Co., New York; class 769 — *a.* Insulated wires (high grade); *b.* Lead covered cables.

Standard Paint Co., New York; class 769 — Insulating compound liquid (P. & B.).

Vetter, J. C., & Co., New York; class 769 — Current adapter socket.

GROUP 127.— ELECTRIC MOTORS.

C. & C. Electric Motor Co., New York; class 773 — Electric motors, direct current, constant potential.

Otis Bros. & Co., New York; class 773 — Electric motors, direct current, constant potential, with control devices.

GROUP 128.— APPLICATION OF MOTORS.

C. & C. Electric Motor Co., New York; class 776 — Electric motors, directly connected to fans and blowers.

Electric Launch & Navigation Co., New York; class 776 — Electric launches.

General Electric Co., New York; class 775 — *a.* Electric street railway system; *b.* Electric elevated railway system; *c.* Electric locomotives for service in mines; *d.* Electric locomotives for shifting and

general railroad services; class 776—*a.* Electric hoisting apparatus; *b.* Electrically driven ventilating apparatus; *c.* Electrically driven rock working machinery; *d.* Electrically driven pumping machinery.

Otis Bros. & Co., New York; class 776—Electrically driven pump.

GROUP 129.— ELECTRIC LIGHTING.

Excelsior Electric Co., New York; class 778—Arc lamps for direct current circuits.

Frink, J. P., New York; class 779—Screen reflectors for incandescent lamps.

General Electric Co., New York; class 778—*a.* Arc lamps for constant potential circuits; *c.* Search lights; *b.* Arc lamps for constant current circuits; *d.* Ornamental lamp posts; *e.* Switch boards for arc light circuits; class 779—*a.* Appliances used in incandescent lighting; *c.* Incandescent lamps; *b.* Complete collection of incandescent lamps; class 779A—*a.* Electrically illuminated fountains; *b.* Incandescent lamps used in the decoration of rooms and other structures.

General Incandescent Arc Light Co., New York; class 778—Arc lamps for constant potential circuits.

GROUP 131.— ELECTRO-METALLURGY.

Ringler, F. A., & Co., New York; class 784—Half-tone electrotypes, steel faced.

Zucker & Levett, New York; class 785—Collection of chemicals, etc., used in electro-plating.

GROUP 133.— TELEGRAPH AND ELECTRIC SIGNALS.

Brixey, W. R., New York; class 790—Telegraph and telephone cables (underground, aerial and submarine).

Bunnell, J. H., New York; class 790—Telegraph apparatus.

Commercial Cable Co., New York; class 790—*a.* Cuttriss' telegraph apparatus for ocean cable services; *b.* Working model of the ocean telegraph, using Muirhead's artificial resistances.

Electric Selector & Signal Co., New York; class 796—System of electrical selection and individual control.

Gamewell Fire Alarm & Police Telegraph Co., New York; class 794—Fire alarm telegraph system.

Greeley, E. S., & Co., New York; class 790—Telegraph apparatus.

Western Union Telegraph Co., New York; class 790—Quadruplex telegraph apparatus.

GROUP 135.— SCIENTIFIC ELECTRICITY.

Waite & Bartlett Mfg. Co., New York; class 809—Special faradic apparatus.

GRAUP 137.— HISTORY AND STATISTICS.

"Electrical Engineer," New York; class 816—Original model of Davenport's electric railway.

General Electric Co., New York; class 816—Collection of historical electrical apparatus.

GROUP 138A.— PROGRESS AND DEVELOPMENT OF ELECTRICAL SCIENCE.

General Electric Co., New York; class J—Engine dynamos; class N—Three phase system of power transmission; class P—*a.* Edison feeder system for the distribution of electrical energy; *b.* Edison three-wire system for the distribution of electrical energy.

Phelps, A. H., Glens Falls; class C—Apparatus for electro thermogravure of glass, etc.

The foregoing list of awards to exhibitors from New York has been carefully compared with the records of this department, and is correct.

W. E. ANDERSON,
*In charge of Department of Electricity.*

*May* 26, 1894.

# AWARDS GRANTED NEW YORK STATE EXHIBITS IN DEPARTMENT K, FINE ARTS.

GROUP 139.— SCULPTURE.

Adams, Herbert, Brooklyn.— Portrait bust of a lady (marble); Primavera (marble bust); St. Agnes' Eve (plaster bust, colored).

Elwell, F. Edwin, New York.— Charles Dickens and Little Nell (bronze).

Niehaus, C. H., New York.— Historical door for Trinity Church (plaster); Athlete (plaster).

Rogers, John, New York.— Statue of Abraham Lincoln, seated (plaster).

Ruckstuhl, F. Wellington, New York. — Evening (marble).

GROUP 140.— OIL PAINTINGS.

Blashfield, Edwin H., New York.— The Angel with the Flaming Sword; Christmas Bells; portrait.

Brush, George de Forest, New York.— Mother and Child; The Head Dress; The Indian and the Lily; The Sculptor and the King.

Church, F. S., New York.— Knowledge is Power; The Viking's Daughter.

Cox, Kenyon, New York.— Painting and Poetry; An Eclogue; Diana; The Pursuit of the Ideal; Music; Echo; May; portrait of L. H. K.; A Solo; portrait of St. Gaudens; Flying Shadows; portrait of Roger D.

Curran, Charles C., New York.— Winter Morning in a Barnyard; Salle de la Venus de Milo; Sealing the Letter; The Iris Bed; Early Morning in June; A Winter Fog; A Cabbage Garden; Under the Awning; A Dream; A Breezy Day; A Corner in a Barnyard.

Dewing, T. W., New York.— Summer Twilight; A Musician; A Lady in Blue; a portrait; a portrait; portrait of W. M. Chase; The Days.

Donoho, G. Ruger, New York.— La Marcellerie; Explorers.

Foster, Ben., New York.— First Days in Spring; The Returning Flock; A Maine Hillside; In Fontainebleau Forest.

Gaul, Gilbert, New York.— Charging the Battery; Silenced.

Hassam, Childe, New York.— Autumn Landscape, On the Way to the Grand Prix; Midsummer Morning; Cab Station, Rue Bonaparte; A Snowy Day on Fifth Avenue; Indian Summer.

Hitchcock, George, New York.— Tulip Culture; The Scarecrow.

Johnson, Eastman, New York.— Portrait of Dr. McCosh; The Nantucket School of Philosophy; The Cranberry Harvest, portrait of a girl; Two Men; My Portrait; life size portrait.

Jones, H. Bolton, New York.— Spring; The Flax Breaker.

Kappes, Alfred, New York.— Rent Day; Tattered and Torn.

Kendall, Wm. Sargent, New York.— The Glory of Fair Promise; Saint Yves Pray for Us.

McIlhenny, C. Morgan, Shrub Oak.— On the Beach.

Mowbray, H. Siddons, New York.— The Rose Harvest; Arcadia; Scheherazade; Evening Breeze.

Murphy, J. Francis, New York.— November Grays; The Hazy Morn.

Palmer, Walter L., Albany.— Autumn Morning; Mist Clearing Away; An Early Snow; January.

Picknell, Wm. L., New York.— Sunday Morning; Early Morning; The Road to Concarneau.

Platt, Charles A., New York.— Winter Landscape; Early Spring.

Reid, Robert, New York.— Vision of St. Angela d'Agnant; The Red Flower; portrait of little Miss S.; Her First Born.

Robinson, Theodore, New York.— The Layette; Winter; A Roman Fountain.

Simmons, Edward E., New York.— Early Moonlight, Bay St. Ives; Darby and Joan; The Carpenter's Son.

Thayer, Abbott H., Scarboro.— Virgin Enthroned; portrait of a lady; Brother and Sister.

Tiffany, Louis C., New York.— Market at Nuremburg; Pottery Market at Wurtzberg.

Tryon, D. W., New York.— Autumn: Sunset at Sea; Rising Moon, Autumn; Springtime; Morning; Starlight; Night; October; Winter Evening; The Rising Moon; A Winter Afternoon; A Salt Marsh, December; Daybreak, New Bedford Harbor.

Turner, C. Y., New York.— The Coppersmith; John Alden's Letter; The Days

that are no More; Saw Wood and Say Nothing; Pride of the Farm; Washing Day; The Grand Canal, Dordreeht; Courtship of Miles Standish; Afternoon Tea; Gossips; On the Beach, Easthampton.

Walker, Henry O., New York.— Hagar and Ishmael; Boy on a Donkey; The Gift Bearers.

Walker, Horatio, New York.— A Stable Interior.

Weir, J. Alden, New York.— Summerland; The Christmas Tree; Autumn; The Young Student; portrait; The Lane; The Open Book; portrait of Webb Weir; portrait of Admiral Farragut.

Wiles, Irving R., New York.— Sunlight in the Studio; portrait; Sunshine and Flowers; The Sonata; A Lady in Green; A Girl in Black.

## GROUP 141.— WATER COLORS.

Franzen, August, New York.—Afternoon; Before the Rain.

Hassam, Childe, New York.— Montmartre; Springtime in the City; Fifth Avenue; The Rain.

Lampert, Emma E., Rochester, N. Y.— A Bread Winner; Through the Meadows in Holland.

McChesney, Clara T., New York.— Still Life; The Old Cobbler.

McIlhenny, C. Morgan, Shrub Oak.— Moonrise; Bull Calf; Old Friends.

Nichols, Rhoda H., New York.— Chrysanthemums; Washing Day.

Sherwood, Rosina E., New York.— September; In the Orchard; Sunlight in the Orchard.

Smedley, W. T., New York.— "There could be no doubt," thought Miss Latymer, "that it was to be the 'intense elderly;'" "Up Among the Great Iron Arches;" A Lazy Companion; Jackson Park, part of the Exhibition Grounds; Entrance to the Hall of Mines, in process of construction; Near the Hall of Mines; The Administration Building; Site for the Statue of the Republic.

Tiffany, Louis C., New York.— Cobblers at Bouferik, Algiers; A Street in Algiers; Cathedral at Morlaix; Street in Algiers; Feeding the Flamingoes; Summer.

Twachtman, J. H., New York.— Pier near Newport; Winter.

## GROUP 143.— ENGRAVINGS, ETCHINGS AND PRINTS.

Mercier, Gustave, New York.— Automedon; The Day's Work Done; Vive la Fidelité; Education of the Virgin.

Moran, M. Nimmo, New York.— Point Isabel, Florida; Florida Forest; Summer, Easthampton; Edge of Georgia Pond; The Old Homestead; Between the Gloaming and the Murk; Twilight, Easthampton; Bridge over the Delaware; Haunt of the Muskrat; Conway Castle, Wales; Bushkill Bridge; Evening, Easthampton.

Platt, Chas. A., New York.—Arnheim; The Mense; Brittany Landscape; Brittany Farm; Willows on the Coast; Dieppe; Dordreeht; Naples; Honfleur; Passenger Boats, on the Seine; Pier at Lennor: Under Pont Ste. Marie; Two Sloops; Inland Port, A Spring Flood; Brooklyn Bridge; Pont St. Michael.

Weir, J. Alden, New York.—Dr. R. F. Weir; Christmas Tide; Blacksmith Shop; John F Weir; By the Evening Lamp; The Back Yard; The Little Fountain; Sulby Glen; The Lamp; Castle; Head; Figure with Sleeping Dog; Portrait of a Lady; three etchings; one dry point and one etching; Frugal Repast — child reading; head; four heads; two etchings on zinc; three etchings and three dry points; two etchings and one dry point; one etching and one dry point· one etching and one dry point; two dry points; H. E. Weir and Roht. Weir; one etching and one dry point.

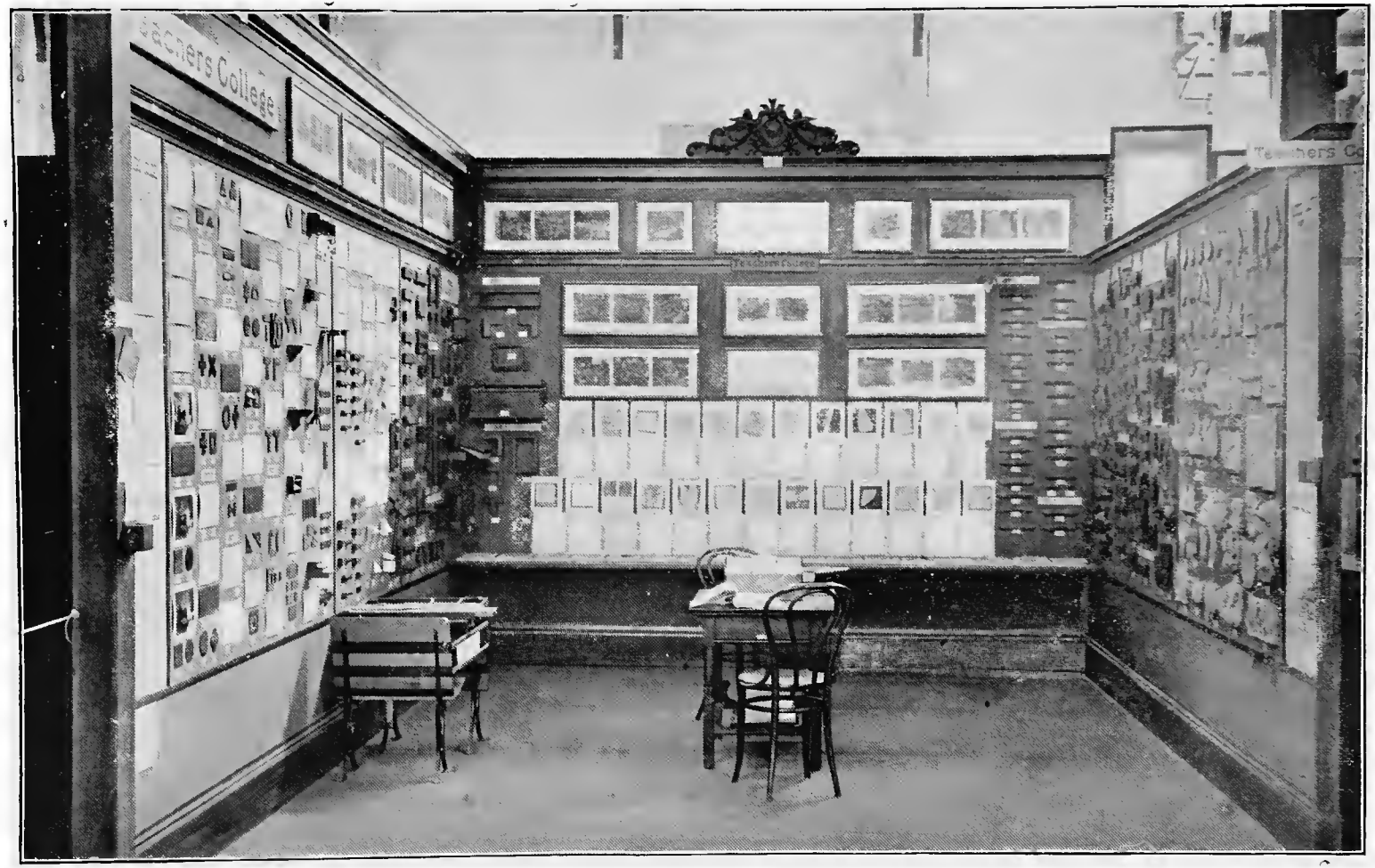
Aikman, Walter M., Brooklyn.— Under the Willows; Wordsworth; A Modern Comanche; Grand Canal, Venice; Rowing Down to Iffley; Bringing Home the Christmas Tree; Sunset, La Hulpe, Belgium; The Sheep Pasture; The Pendant Jewel Weed.

Aitken, Peter, New York.— On the Otomi Pass, Japan; A Scene in Kent; The Conspirators.

Bernstrom, Victor, Grandview-on-Hudson.— A Little Musie; Limbering Up; Philip; The Moujik; Drawing Water for the Camp; Snow Angel; Trapped at Last; The Shepherdess; The Mystery of Life; Pirate's Haven, Shark River, N. J.; The Dead Matador.

Cole, Timothy, The Century Co., New York.— Delphian Sibyl; Knight of Malta; The Concert, The Tribute Money; Venice Enthroned; Battle of St. Ephesius; Madonna and Child; Miracle of St. Mark, Group of Angels; Mary Magdalen; Aeneas; Madonna of the Goldfinch; Mona Lisa; Three Ages of Man, Unknown Man; Verocchio; Madonna and Child; Detail of the Last Judgment; Two Angels; Man with a Violin; Madonna and Child; St. Agnes; St. Jerome; St. Liberalis; The Entombment.

Cooper, Edith. New York.— Sheep; White Birches; Garrison Marching Out with the Honors of War, Lille 1708; Springtime of Love.




TEACHERS' COLLEGE

Davis, Samuel P., Brooklyn.—An Afternoon Nap; Cat and Kittens at Play; French Hunting Dog.

Del'Orme, E. H., New York.—Esquimaux Life; Birthplace of Beethoven; Canoeing in Florida; Garden Scene in Venice; Landing of the Dutch Fleet.

Johnson, Thomas, New York.—Head of a Man; Browning; Dr. J. Weir Mitchell; Bishop Potter; Mrs. Bradley Martin; Paderewski; Tennyson; Portrait of A. Lang; Portrait of a Girl; Daubigny; Liszt; Portrait of a Child.

Miller, William, New York.—Seven Wood Engravings.

Putnam, S. C., Corona, L. I.—Identity; Waterfall by Moonlight; Mirabeau and the King's Messenger; Princess Marie of Austria; A Cozy Corner; Carne Castle; At the Continental Spring; Pirates Seizing a Ship; A Sheep Pasture.

Schladitz, E., New York.—Love Locked Out; Grandmother.

Schlecht, Charles, New York (steel engravings).—Eyes to the Blind (after A. F. Bellows); Love's Young Dream (after Jennie Brownscombe); Thoughts by the Sea (after J. G. Brown); The Smoker (after Leon Moran); The Wish (after Percy Moran).

Tinkey, John, Brooklyn.—Exchanging Confidences; All Halloween; Swine Herd, River Danube; Apache Indian Firing on Teamster; English Cathedral.

Wolf, Henry, New York (wood engravings).—The Roadside (after R. Swain Gifford); New England Peddler (after Eastman Johnson); My Sister Lydia (after E. C. Tarbell); The Virgin Enthroned (after A. H. Thayer); Twilight (after Alexander Harrison); The Portrait (after Will. H. Low); Alice (after W. M. Chase); Miss Beatrice Goelet (after J. S. Sargent); Tiger (after Adolph Menzel); Madonna and Child (after Dagnan Bouveret); Thirst (after Gerome).

## GROUP 144.—MISCELLANEOUS DRAWINGS.

Brown, J. Appleton, New York (pastels).—Sand Dunes; December; Springtime; Summer.

Blum, Robert, New York.—Wandering Etas (pen drawing); Japanese Policeman (pen drawing); A Shop for Lamps (pen drawing); Japanese Girl (pen drawing); Its Tiny Head Swung Hither and Thither (pen drawing); The Ameya (pen drawing); Be Pleased to Bring in the Honorable Account (wash drawing); My Eye was Caught by the Gleam of a Brass Door Knob (wash drawing); She Looked at me and Spoke Trustingly (wash drawing); The Tall Ladder of a Fire Station (wash drawing); Tea Pot and Crockery (wash drawing); Benteen Cave, Enoshina (wash drawing); The Amina Japonica (wash drawing); Where the Proprietor, Stark Naked, Pestles the Paddy (wash drawing); She Laid her Hand on his Arm (wash drawing); Head of the Street, Enoshina (wash drawing); A Street Scene, Enoshina (wash drawing); Japanese Dinner at the Golden Koi (wash drawing); A Little City Back Yard (wash drawing); Watching the Election Returns, Japan (wash drawing); A Begging Priest (wash drawing); On the Hill side at Enoshina (wash drawing); The Plankway to Benteen Cave (wash drawing); Fray Innocencio and Flojo (pen drawing); The Man is Dead, He Said (black and white).

Chapman, Carlton T., New York.—Port of Valparaiso in a Norther (wash drawing); White Star Steamer, Majestic (black and white); The Largest Steamer on the Lake (black and white).

Gaul, Gilbert, New York.—A Pulque Carrier, Mexico (black and white in oil); The Journey in the Market Cart (black and white in oil); Landing at Chagres (black and white in oil); Pleasant Weather in the Gulf (black and white in oil); Gorgona, Panama (black and white in oil); The Pilot, Jamaica (black and white in oil); The Kitchen, Jamaica (black and white in oil); A Cheer for the Old Flag (black and white in oil); The Master's Lunch, Jamaica (black and white in oil); Dining-Room, French's Hotel, Panama (black and white in oil); "The Steamer is in," Panama (black and white in oil); A Crowded Steamer (black and white in oil).

Gibson, C. D., New York.—Yes, It is Too Bad (pen drawing); You Must Tell Your Friend Not to be Frightened at the House (pen drawing); Awfully Kind of You to Come to Our Shanty (pen drawing); And the Two Smoked on in Silence (pen drawing); Aren't You Pleased with Me (pen drawing); Debutantes Leaning on his Arm (pen drawing); The Young Men in the House Thought Her a Jolly Girl (pen drawing); Mrs. Vernon Had Crossed the Rubicon (pen drawing); He is Waiting for Me (pen drawing); Lord and Lady Wm. Hampshire (pen drawing); We are Behind Time, Mrs. Vane Benson and I (pen drawing); When Luella Lost her Grip (pen drawing); The Meeting in Mrs. Van Shuter's Empire Room (pen drawing); I am Glad that Tempest in a Teapot is Over (pen drawing); Her First Appearance (pen drawing); The American Girl (pen drawing); At the Fair (pen drawing); I Wish to God You were Out of this Business (wash drawing); In the Studio (wash drawing); A Serious Question (wash

drawing); Cartoon for Life (pen drawing); Two Girls and a Man (pen drawing); The Jury (pen drawing); In the Moonlight (pen drawing); Drifting Apart (pen drawing); Will Penelope Land the Baron (pen drawing); At Mrs. Flatsharps (pen drawing); The Prisoner at the Bar (pen drawing); Time (pen drawing); In Leap Year (pen drawing); In Leap Year, Starting on their Wedding Journey (pen drawing); In Leap Year, After Having Kept the Men Waiting (pen drawing); The Horse Show (pen drawing); That Delicious Moment (pen drawing); A Summer Vacation (pen drawing); Fourth of July (pen drawing); At Mrs. Van Tappan's (pen drawing); At Mrs. Daubleigh Chrome's (pen drawing); At the Gentlemen's Sons Chowder Club (pen drawing).

Gibson, W. Hamilton, Brooklyn.—Night Hawk (pen drawing); Orange Boughs (charcoal); A Misty Morning (smoke); Los Loros, Andes (black and white); A California Garden (black and white); The Bobolink at Home (black and white); A Midnight Tragedy (black and white); A Wild Garden (black and white); A Winter Ravine (black and white); The Sly Silver Fox (black and white); Cyrepedium Spectabile (black and white); A Relic of the Departed South (black and white); A Southern Cane Brake Jungle (black and white); On Bayou Teche, Louisiana (black and white).

Low, Will H., New York.— Through the Tendriled Branches the Famed Æolian Choir (black and white); Old Field at Barbizon (wash drawing); Narcissus (black and white, oil).

Metcalf, W. L., New York.— Stinnard House, Pelham Bay Park (pen drawing); The Picture Gallery (black and white); He Drove the Knife Through his Hand (black and white); Cable Hut at Shore End (black and white, oil).

Reinhart, Charles S., New York.— A Kissing Gate (pen drawing); Government Wharf, Fort Monroe (charcoal); Up the Hudson (pen drawing); Portrait of Charles Dudley Warner (pen drawing); A Near Sighted Deputy (charcoal); Liberal and Conservative (charcoal); A Tramp (charcoal); Christmas Morning (charcoal); Illustration (black and white); Skating (wash drawing).

Remington, Frederick, New Rochelle. —Roping in a Horse Corral (pen drawing); The Old Trapper, pen drawing; A Member of the Mounted Police, Canada (pen drawing); Infantry Covering the Withdrawal of Cavalry (wash drawing); Behind the Breastworks, Besieged by Utes (wash drawings); A Sample Steed (black and white); A War Party of Comanches "Jumping" a Hunter's Camp (black and white); Splitting the Buffalo Herd (black and white, oil); Boots and Saddles (wash drawing); Rounding Up (wash drawing); Pitching Broncos (wash drawing); General Miles Reviewing the Mexican Army (wash drawing); Polish Village (wash drawing); Some Idle Notes on "The Most Noble Profession," in Europe (wash drawing); At the Horse Show (wash drawing).

Smedley, W. T., New York.— Exhibition Grounds, 1891 (black and white); Before the Agricultural Building (black and white); Lake-front Side of Main Building (black and white); At the Hotel (black and white); In a Restaurant (pencil); Illustration (wash drawing); Old Guard Ball (black and white); An Invitation to the Dance (black and white); In the House of Representatives (black and white); Cowboy (black and white); Illustration (wash drawing); Ladies' Gallery, House of Representatives (black and white); Easter Lillies (black and white); Broadway at Night (black and white); Promenade Concert (black and white); A Bishop (black and white); Relics of George Washington (black and white); Onnalinda (black and white); When the Tide Comes In (black and white); "Jane Field, I ain't Esther Maxwell" (black and white); On the Rocks at Narragansett (black and white); Sunday Morning, Fifth Avenue (black and white); A King's Daughter (black and white); Christmas Shopping (black and white); On the Down Town Ferry (black and white); A Bit of Decoration (black and white).

Thulstrup, T. de, New York.— Joseph Choate (wash drawing); Columbian Exposition, Workers in Staff (black and white); A Belated Passenger (black and white); An Evening at the Horse Show (black and white); Admiral Walker (black and white); The Three Hussars (black and white); The Dinner Table in a Norwegian Farmhouse (black and white); A Moujik's Funeral (black and white); Norwegian Fisher Family (black and white); At the Traktier's (black and white); Kroll's Garden, Berlin (black and white); Military Road in the Caucasus (black and white); Circassians of the Imperial Guard (black and white); Georgian Prince (black and white); The Yachting Party (black and white); Persian Bazaar, Nijni Novgorod (black and white); Horse Artillery Going into Action (black and white); Crossing the Channel (black and white).

Wenzell, A. B., New York.— The Diamonds (black and white); sketches, Nos. 1–12 for "Life."

Zogbaum, R. F., New Rochelle.— A Landing, the Advanced Skirmishers (black and white); Shore Drill, Pegging Away at an Imaginary Enemy (black and white); All Hands to Skylark (black and white).

GROUPS 139–145.— ARCHITECTURE.

Brunner & Tryon, New York.— Main Entrance, Temple Beth-El (pen); Shrine for Temple Beth-El (water color); Sahlein Building (water color); Buildings to be Erected for W. F. Havemeyer.

Gibson, R. H., Brooklyn.— Competitive Design for the Cathedral of St. John the Divine (pen drawing).

Hardenburg, H. J., New York.— Waldorf Hotel (water color by Hughson Hawley).

Hunt, R. M., New York.— Model of part of the house of W. K. Vanderbilt.

Lamb & Rich, New York.— Berkeley School, New York city (photograph); Germania Fire Insurance Building, New York city (photograph).

The foregoing list of awards has been carefully compared with the books of this department and found correct.

FRANK R. PHISTER,
*Superintendent Fine Arts Department.*

*January* 11, 1894.

# AWARDS GRANTED NEW YORK EXHIBITS IN DEPARTMENT I, LIBERAL ARTS.

GROUP 147.— PHYSICAL DEVELOPMENT, HYGIENE.

American Continental Sanitary Co., New York; disinfecting fluid, sanitas disinfecting fumigators, automatic disinfectors.

Amos, Alex. M., Buffalo; steam cooker.

Associated Charities, Newburgh; forms and reports, 1 vol.

Binghamton State Hospital, Binghamton; samples patients' work.

Board of Health, New York; album.

Brooklyn Orphan Asylum, Brooklyn; photographs, etc.

Buffalo Hospital of Sisters of Charity, Buffalo; portfolio showing results.

Children's Home Association, Amsterdam; forms and reports, 1 vol.

Children's Aid Society, Brooklyn; forms and reports, 1 vol.

Children's Aid Society, New York; reports, 5 vols.

Croton Aqueduct Com., New York; charts, maps and photographs.

Demilt Dispensary, New York; reports, 2 vols.

Dennis, Miss Caroline E., Auburn; training schools for nurses.

Fitch Accident Hospital, Buffalo; bandage winder, emergency bag for ambulance work.

Fitch Créche, Buffalo; photographs, etc.

German Evangelical Home, Brooklyn; reports, 1 vol.

Hebrew Free School Association, New York; 3 charts.

Hebrew Orphan Asylum, New York; specimen work.

Hebrew Sheltering Guardian Society, New York; reports, 1 vol.

Home for Aged and Infirm, New York; 4 charts.

Home for Aged and Infirm, Yonkers; 3 charts.

Home for Friendless, Buffalo; charts and photographs on wing frame.

Home of the Good Shepherd, Troy; portfolio showing aims, etc.

House of the Good Shepherd, Utica; photographs and reports, 1 vol.

Hunting, Nelson, Albany; Hunting automatic water distiller.

Improved Dwelling Co., New York; models and plans for improved dwellings.

Ingleside Home, Buffalo; forms and reports, 1 vol.

Ladies' Deborah Nursery and Children's Protectory, New York; 3 charts.

Ladies' Sewing Society of Hebrew Society, New York; 1 chart.

Ladies' Society of Mt. Sinai Hospital, New York; 2 charts.

Little Mothers at Work and Little Mothers at Play, New York; photographs, etc.

Louis' Down Town Sabbath and Daily School, New York; specimens of needle designing and shorthand.

Louis' Down Town School, New York; reports, 1 vol.

Methodist Episcopal Church Home, New York; historic outline.

Montefiore Home for Chronic Invalids, New York; reports, 1 vol.

Mt. Sinai Hospital, New York; training school for nurses.

New York State Reformatory, Elmira; charts, etc.

New York Deaf and Dumb Institute, New York; work of inmates, etc.

New York State; model poor house.

New York State, Albany; Workingman's Model Home.

New York Association for the Improvement of the Condition of the Poor, New York; colored plans and elevations.

New York Orthop. Dispensary and Hospital, New York; reports, 1 vol.

New York State Board of Charities; annual reports; framed statistical charts.

New York State Workingman's Home, Albany; investigation of workingmen's diet.

Orphan Home of the Holy Saviour, Cooperstown; house records.

Presbyterian Hospital, New York; training school for nurses.

Quarantine System, New York; charts and maps.

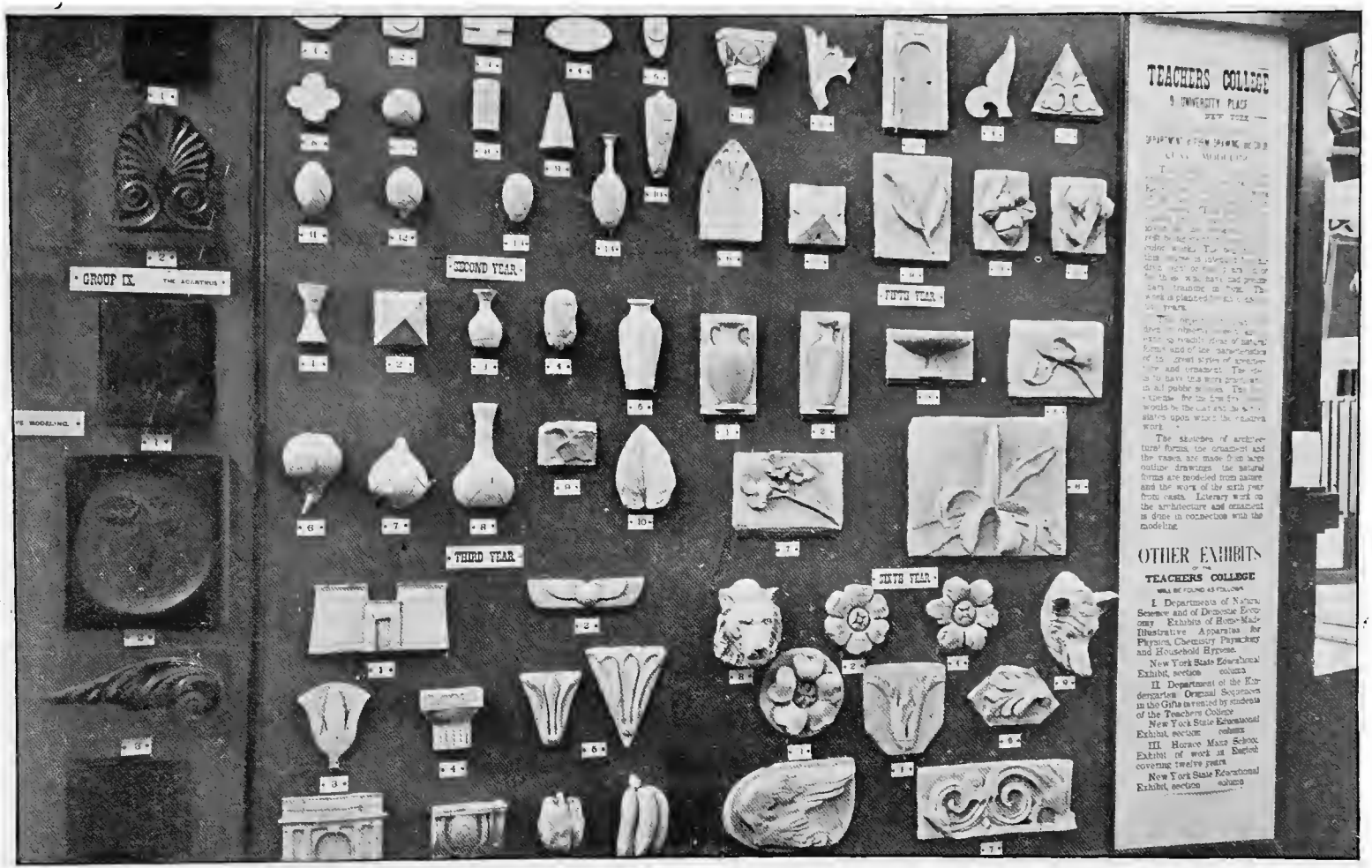
Remington, Cyrus K., Buffalo. photographs of crematory.

St. Coleman Orphan Asylum, West Troy; portfolio showing the advanced views, etc.

St. John's Guild, New York; pictures, 3, bed 1.

St. John's Asylum, Utica; portfolio.

St. Vincent's Female Orphan Asylum, Buffalo; folding case, industrial work and book.




CLAY MODELING, FROM TEACHERS' COLLEGE

Sanitarium of Hebrew Children, New York; charts 1, pictures 4, vol. 1.

Soldiers and Sailors' Home, New York; reports, 1 vol.

State Board of Health, Albany; charts, maps and tables.

State Industrial School, Rochester; 4 heavy riveting hammers, polished handles.

State Industrial School, Rochester; grade map, work of primary department, 1 vol.

Temperance Home for Women and Children, Deering; chart and photograph on wing frame.

Utica State Hospital, Utica; samples patients' work.

Wilmot, Castle & Co., Rochester; steam cooker.

Young Ladies' Benevolent Association, Auburn; forms, 1 vol.

## GROUP 148.—MEDICAL AND SURGICAL INSTRUMENTS.

Daggett Table Co., Buffalo; posturing tables.

Drevet Mfg. Co., New York; Marchand's Peroxide of Hydrogen; Marchand's Atomizer and Ozonizer; Marchand's Glycozone.

Elkins, Miss Fanny, New York; color drawings of anatomy.

Fairchild Bros. & Foster, New York; Pepsin tablets; Panopepton; Peptogenic milk powder; Peptonesian tubes; Deastasic Essence of Pancreas; Tripsin. Extractum Pancreatis; Glycerinum Pepticum; Essence of Pepsin; Pepsin in scales.

Frees, C. A., New York; artificial limbs.

Harvey, The G. H., Co., Saratoga; pharmaceutical products.

Johnson & Johnson, New York; medical and surgical appliances.

Marks, A. A., New York; artificial limbs, surgical appliances and invalid vehicles.

Mt. Sinai Hospital and Training School, New York; charts and reports.

Presbyterian Hospital and Training School, New York; hospital appliances.

Reed & Carnrick, New York; Kumysgen, Pancrobeline liquid.

Ritter Dental Mfg. Co., Rochester; Columbian dental chairs; dental tables.

Seabury & Johnson, New York; medical, surgical and antiseptic specialties.

Standard Homeopathic Globule Mfr., New York; globules, desks, etc.

Tilden Co., The, New Lebanon; pharmaceutical preparations; fluid extracts.

Ward, H. A., Rochester; skeletons.

Ward, H. A., Rochester; ossific preparations.

## GROUP 149.—EDUCATION.

For catalogue of awards to schools exhibiting in the New York collective exhibit see, also, page 468.

Academy of the Holy Rosary, New York; class work.

Albany Academy, Albany; students' work, course of study, photographs, Beck Literary society.

Albany Business College, Albany; work in bookkeeping, stenography, etc.

All Saints School, Brooklyn; class work, etc.

American Museum Natural History, New York; photographs of two buildings, etc.

Art Students' League, New York; photograph prints of figures modeled in clay from living model.

Assumption School, Brooklyn; class work, bookkeeping, etc.

Bensinger Bros., New York, Chicago and Cincinnati; text books.

Berkely School (Dr. John White), New York; administrative forms, photographs.

Brooklyn Diocese, Brooklyn; class art needlework, kindergarten school, fifty-four schools.

Brothers of the Christian School, New York; literary, scientific, classical and art work.

Brothers of Mary, New York; class work, penmanship, maps and languages.

Buffalo Diocese, Buffalo; class art needlework, kindergarten school, fifty-four schools.

Buffalo Seminary, Buffalo; geometry and other school work.

Caldwell, G. M., Miss, New York; embroidery and endowment of Catholic University of America, first foundress.

Canisius College, Buffalo; class work and drawings.

Cary, Florence Elizabeth, New York; glazed and framed designs.

Cathedral School for Boys, New York; work in literature, mathematics, etc.

Cathedral School for Girls, New York; needlework, weaving, embroidery, literature, etc.

Catholic Male Orphan Asylum, Troy; glasswork, drawing and other work.

Catholic Publication Society, New York; text books.

Children's Aid Society, New York; flag made by children.

Christian Brothers' Academy, Albany;

school work, drawing, kindergarten and photographs.

Christian Brothers of United States America, New York; series of drawing books, text books on same.

Christiansen Institute, Brooklyn; school work.

Coe, E. M., Miss, New York; kindergarten appliances for study of color, form and sciences.

Colgate University, Hamilton; twenty-three photographs, twenty statistical charts, handbooks, course of study, etc.

College City of New York, New York; statistics, registers, etc.

Columbia College, New York; photographs, charts, plans, works of faculties and alumni.

Convent of Holy Rosary, New York; class work, kindergarten and needlework.

Cornell University, Ithaca; photographs, grounds, buildings, interiors, university work.

Cortland Normal School, Cortland; collective exhibit.

De La Salle Inst., New York; engineering, literary work, drawings, etc.

German Catholic Orphan Asylum, Buffalo; class work, fancy work, etc.

Hall, Margery, manager day nursery, New York; day nursery.

Harrison, Wm. B., New York; school chairs.

Helpers' (14) School, Gardensville; class work and map drawing.

Holy Angels' Academy, Buffalo; class work.

Holy Cross Girls' School, New York; class work and map drawing.

Holy Trinity School, Brooklyn; class work, map drawing and kindergarten.

Immaculate Conception, male school, New York; class work, drawings, charts, etc.

Immaculate Conception, male school, New York; work in English, German, business forms, etc.

Industrial School, Church Holy Communion, New York; large frame containing course in sewing.

Industrial School of St. Mary, Brooklyn; fancy work, shoes, etc.

Institution of Mercy, New York; needlework lace curtains.

Institute for Blind, New York; specimens showing methods of instruction.

Kitchen Garden (Emily Huntington, mng.), New York; kitchen garden.

Kunz, G. F., New York; portraits of mineralogists.

La Salle Institute, New York; class work, drawings, etc.

La Salle Institute, Troy; class work, 54 volumes.

Le Couteulx St. Mary's Deaf Institute, Buffalo; class work, maps, drawings, etc.

McClelland, Miss Mary (inventor), Albany; educational panopticon.

Manhattan College, New York; literary, scientific, classical and art work.

Nativity Academy, Brooklyn; class work and drawings.

Nativity Institute, Brooklyn; class work and drawings.

New York Catholic Protectory, Westchester; embroidery and fancy work.

New York Catholic Protectory for Boys, Westchester; class work, 800 copy books.

New York City Public Schools, New York; relief maps New York State.

New York Diocese, New York; class art needlework, kindergarten school, sixty-nine schools.

New York Military Academy, Cornwall-on-Hudson; case of botanical specimens, 36 photographs, 2 vols., written work, handbooks; ground plan of buildings.

New York School of Design for Women, New York; designs for wall paper, silk, architectural drawings, etc., 200 designs.

New York State; educational exhibit.

New York State Library, Albany; publications, bulletins.

New York State Library School, Albany; 59 bound vols. manuscript.

New York State Museum, Albany; scientific publications.

New York Trade School, New York; specimen work in sign painting, plumbing, stone, wood and iron work, etc.

Niagara University, Niagara; portraits, class work, exercises, etc.

Normal School, Fredonia; students' work in drawing, painting, etc.

Normal College (girls), New York; students' work.

North American Phonograph Co., New York; phonographs.

Operti, Alberti, New York; Arctic scene, tableau and painting.

O'Shea, P., New York; text books.

Oswego State Normal School, Oswego; work of faculty and alumni.

Oswego State Normal School, Oswego; collective exhibit.

Our Lady of Angels Academy, Elmira; class work.

Our Lady of Good Council's School, Brooklyn; class work and drawing.

Our Lady of Mercy's School, Brooklyn; class work and drawing.

Our Lady of Victory, West Lanaka; drawing and class work.

Parish Schools of New York city; school work (25 schools).

Packard's Business College, New York; work in bookkeeping, stenography, typewriting, etc.

Pratt Institute, Brooklyn; shorthand library, etc.

Public Schools, Albany; high school work.

Public Schools, Albany; kindergarten work, primary and grammar school work

Public Schools, Albion; elementary and high school work.

Public Schools, Buffalo; students' work.

Public Schools, Buffalo; primary and grammar work.

Public Schools, Buffalo; high school work.

Public Schools, Binghamton, school work, photographs and plans.

Public Schools, Cohoes; elementary and high school work.

Public Schools, Lansingburg; kindergarten and elementary school work.

Public Schools, New York; work in manual training.

Public Schools, New York; grammar school work.

Public Schools, New York; primary school work.

Public Schools, Poughkeepsie; high school work.

Public Schools, Poughkeepsie; primary and grammar work.

Public Schools, Port Chester; school work.

Public Schools, Rochester; high school work.

Public Schools, Rochester; primary and grammar work.

Public Schools, Syracuse; high school.

Rensselaer Polytechnic Institute, Troy; civil engineering theses, etc.

Rensselaer Polytechnic Institute, Troy; bridge designs, etc.

Ritterhoff, Miss Amelia, New York; pen decoration and lettering.

Rochester Athenaeum and Mechanics' Institute, Rochester; drawings, paintings, modelings, etc.

Rochester University, Rochester; photographs of grounds, buildings, interior work.

St. Agnes School, Albany; school exhibits.

St. Agnes Seminary, Brooklyn; class work, map drawing, etc.

St. Agnes School, Buffalo; class work and map drawing.

St. Alponso's School, New York; class work and drawings.

St. Ann's Male and Female School, Brooklyn; class work and map drawing.

St. Bridget's Academy, New York; class work, drawing and painting.

St. Bridget's Girls School, New York; work in literature, mathematics, etc.

St. Bridget's Male School, Buffalo; class work and drawings.

St. Bridget's Male School, New York; work in mathematics, literature, drawings, fancy penmanship, etc.

St. Catharine's Hall, Brooklyn; photographs of buildings and collective exhibit.

St. Charles Male and Female School, Brooklyn; class work and map drawing.

St. Elizabeth's Academy, Allegany; water colors, lace, gold embroidery and class work.

St. Elizabeth's Academy, Buffalo; class work.

St. Francis' College, Brooklyn; class work, etc.

St. Gabriel's Academy, New York; literature, mathematics, etc.

St. Gabriel's Boys School, New York; literature, drawings, etc.

St. Gabriel's Girls School, New York; class work.

St. James' Female School, New York; language, drawings, etc.

St. James' Commercial School, Brooklyn; examination papers, drawings, etc.

St. James' Male School, New York; 40 vols. mathematics.

St. Jerome's School, New York; class work.

St. John Evangelist School, Brooklyn; class work and map drawing.

St. Joseph's Cathedral, Buffalo; class work and drawings.

St. Joseph's Normal College, Anawalk; De La Salle normal manual.

St. Joseph's Normal College, Anawalk; linear and free hand drawings, herbarium and raised map.

St. Joseph's Normal College, Anawalk; text books, drawings, copy books, etc.

St. Joseph's Academy, Flushing; mechanical drawings and paintings.

St. Joseph's Male School, New York; class work, drawings, etc.

St. Joseph's Academy, Brooklyn; class work.

St. Joseph's Academy, Buffalo; class work, drawings, etc.

St. Leonard's Academy Brooklyn; class work, stenography, etc.

St. Louis Male School, Buffalo; English and German class work.

St. Lawrence School, New York; class work.

St. Mary's Academy, Buffalo; class work, 77 vols.

St. Mary's Academy, New York; literature, mathematics, history, drawings, etc.

St. Mary's Academy, Ogdensburg; class work.

St. Mary's Male School, New York; class work and drawings.

St. Mary's Male School, Yonkers; drawings and class work.

St. Mary's Orphan Asylum, Dunkirk; class work and drawings.

St. Mary's School, Buffalo; class work, paintings, needlework, etc.

St. Nicholas Female School, New York; class work and drawings.

St. Nicholas Male School, New York; class work and drawings.

St. Patrick's Academy, Brooklyn; class work, mechanical drawings, etc.

St. Patrick's Academy, Catskill; produce map, relief maps, etc.

St. Peter's Female School, New York; class work, etc.

St. Patrick's Female School, New York; class work, etc.

St. Patrick's School, Buffalo; class work and drawings.

St. Paul's Male and Female School, Brooklyn; class work.

St. Peter and Paul School, Brooklyn; class work, map drawings, etc.

St. Peter's and Paul's School, Hamburg; class work, drawings, paintings, etc.

St. Patrick's Female School, Newburg; copy books, class work, etc.

St. Stephen's School, Brooklyn; class work, map drawings, etc.

St. Theresa's Academy, Brooklyn; class work, drawings, etc.

St. Theresa's Male School, New York; map drawings, 100 vols. class work.

St. Thomas Aquinas Academy, Brooklyn; class work.

St. Vincent's Academy for Young Ladies, New York; class work, literature, crayons, etc.

St. Vincent de Paul's Academy, Brooklyn; class work and mechanical drawings.

St. Vincent Ferrers School, New York; class work, drawings, etc.

St. Vincent Ind. School, Utica; class work and letters.

St. Vincent's Orphanage and Industrial School, Buffalo; embroidery, fancy work, photographs, etc.

Sach's (Dr.) School, New York; text books, school work.

Sacred Heart School, Buffalo; class work, map drawing; 1 ivory cross, carved; 1 picture.

Sacred Heart Academy, Westchester; work in Latin, Greek, mathematics, etc.

Sacred Heart Institute, Brooklyn; 10 vols. class work and map drawings.

Sacred Heart High School, Buffalo; class work, 38 vols.

Sadlier, Wm. W., New York; text books.

Seven Dolor's School, Buffalo; class work, drawings, paintings and needlework.

State Normal School, Buffalo; students' work.

State of New York, Albany; Normal school system.

Steiger, E., New York; text books.

Syracuse State Institute for Feebleminded Children, Syracuse; exhibit of methods employed in institute.

St. Stephen's School, New York; class work and drawing.

St. John's Protectory and Asylum, West Seneca; industrial work, class work and sewing.

School of Sisters of Notre Dame, New York; class work and language.

St. Joseph's School, New York; class work, maps, drawings and photographs.

Teachers' College, New York; photographs 2 buildings, 20 interiors, manual training exhibit, sewing course.

Thiry, John Henry, Long Island City; statistics and reports.

Tiffany & Co., New York; medals, cartoons and sketches.

Tiffany Glass and Decorating Co., New York; studies, sketches and cartoons for glass.

University of the City of New York, New York; specimens, diplomas and scholarships.

University of the State of New York, Albany; university work, etc., administrative department, forms, etc., 29 vols., 2,000 photographs; examinations, 200 vols., 2,000 papers; university extension, comparative exhibit, syllabi.

Vassar College, Poughkeepsie; photographs of grounds, buildings, interiors, work.

Visitation Academy, Brooklyn; paintings, class work, etc.

Visitation Convent, Brooklyn; 4 paintings.

Visitation School, Brooklyn; class work and drawings.

Weil's (Mrs. Leopold) School, New York; 1 case sewing.

Workingman's School, New York; photographs of school buildings, interiors — collective.

## GROUP 150.— LITERATURE, LIBRARIES, JOURNALISM

American Bank Note Co., New York; bank note engraving, etc.

American Book Co., New York; history of American people.

American Library Association, Albany; library blanks, books, etc.

American Library Association, Albany; comparative library architecture.

American Library Association, Albany; model town library of 5,000 vols.

American Lithographing Co., New York; art and commercial lithographs.

Appleton, Daniel, & Co., New York; books, art works, etc.

Armstrong, Margaret M., New York; book covers.

Bardeen, C. W., Syracuse; school publications, maps, etc.

Bonaventure, E. F., New York; books, binding, etc.

ENTRANCE FROM SOUTH AISLE

Bonaventure, E. F., New York; rare books and fine bindings.

Britannica Pub. Co., New York; books.

Century Co., New York; books, magazines, drawings, etc.

Colby & Co., New York; historical charts.

Columbia College, New York; library book shelving.

Duprat & Co., New York; books.

Fishol, Adler & Schwartz, New York; engravings, etchings, etc.

Free Library of General Society of Mechanics and Tradesmen of New York, New York; library charging system.

Funk & Wagnals, New York; English dictionary.

General Society Mechanics and Manufacturers, New York; books and catalogues.

Harper Bros., New York; miscellaneous books, etc.

Hubbard, H. F., New York; newspaper directory.

Judd, Orange, Co., New York; books and periodicals.

Kellogg, E. L., & Co., New York; school books, charts, etc.

Lieber, B. Franklin, New York; telegraphic cipher.

Lovell, A., & Co., New York; school books, charts and appliances.

McDowell & Co., New York; fashion journals.

Manning, Thomas, New York; American yacht list.

Manufacturers' Pub. Co., New York; reference book.

Marks, Montague, New York; drawings and process of illustrating magazines.

Morse, Miss Alice, Brooklyn; four cards, book covers, Harper Bros.

Moss Engraving Co., New York; engravings.

New York State Library, Albany; library book shelving.

New York State Library, Albany; books and catalogues.

New York State Museum, Albany; relief map of State of New York.

Ottman, J., New York; com. and color lithographic work.

Ottman, J., New York; chromolithographic reproduction of fine art water color and oil paintings.

Packard, S. S., New York; text books.

Radtke, Lauckner & Co., New York; etchings and engravings.

Seeger-Guernsey Co. (The), New York; cyclopedia of manufactures and products.

Schedler, Herman, New York; geographical globes.

Scholl, Bruno, Brooklyn; show posters printed from pine wood.

Scribner's, Charles, Sons, New York; manuscripts, magazines, etc.

Tiffany & Co., New York; illuminations on parchment paper.

Tiffany & Co., New York; copper and steel engraving, stamping, illuminating, etc.

Westervelt, A. B. & W. T., New York; library book shelving.

Wood, Wm., & Co., New York; medical books.

## GROUP 151.— INSTRUMENTS OF PRECISION AND EXPERIMENT;

### PHOTOGRAPHY.

Albertype Co., New York; albertypes.

American Aristotype Co., Jamestown; American aristotypes.

Anthony, E. & H. T., New York; photographic apparatus.

Bates Mfg. Co., New York; numbering machine.

Bausch & Lomb Optical Co., Rochester; optical goods.

Breese, Jas. H., New York; photographs.

Brooks, E. J., & Co., New York; post-office stamps.

Dana, E. C., New York; photographs.

Eastman Kodak Co., Rochester; photographic goods.

Gerry, J. H., New York; astronomical regulator.

Gundlach Optical Co., Rochester; photographs, lenses, microscopic goods, microscopic stands.

Gurley, W. & L. E., Troy; surveying and engineering instruments.

Heinrich, H. H., New York; chronometers.

Heinrich, H. H., New York; marine chronometers.

Keuffel & Esser, New York; surveying instruments.

Kurtz, W., New York; artistic photographic reproduction from nature.

Kurtz, W., New York; azaline photographs.

McAllister, T. H., New York; stereop ticons, magic lanterns, etc.

McMichael, H., Buffalo; photographs.

Pach Bros., New York; photographs, portraits, landscapes, etc.

Photo. Material Co., Rochester; photographic apparatus.

Self Winding Clock Co., New York; self-winding astronomical regulators.

GROUP 152.— CIVIL ENGINEERING, PUBLIC WORKS, ARCHITECTURE.

Baron, Henry, New York; Pennsylvania Railroad Co.
Dormitzer, Mrs. Henry, New York; window cleaning chair and platforms.
Emmet, L. F., New York; designs and drawings.
Gifford, Chas. Alling, New York; New Jersey State Building.
Gilbert, Bradford L., New York; New York Central Railroad Building.
Hunt, R. M., New York; Administration Building.
McKim, Mead & White, New York; New York State Building.
McKim, Mead & White, New York; White Star Line Building.
McKim, Mead & White, New York; Puck Building.
Post, Geo. B., New York; Manufactures and Liberal Arts Building.
Wilson, Jas. G., New York; shutters, etc.

GROUP 153.— GOVERNMENT AND LAW.

American Philatelic Association, New York; collection of stamps.
Cutler Manufacturing Co., Rochester; mail chutes and boxes.
International Postal Supply Co., New York; machine for stamping and canceling envelopes.
New York House of Refuge, Randalls Island; samples of school and industrial work.
United States Trade Mark Association, New York; trade marks and labels.

GROUP 154.— COMMERCE, TRADE AND BANKING.

New York Life Insurance Co., New York; theory of life insurance by charts, pyramids, etc.

GROUP 155.— INSTITUTIONS AND ORGANIZATIONS FOR THE DIFFUSION OF KNOWLEDGE.

Dodge, Miss Grace, New York; working girls' association.
Grider, Rufus, New York; a collection of water color drawings of historic powder horns.
New York State Board of Women Managers, Albany; loan collection of bureau of applied arts.
New York State Board of Women Managers, Albany; folios of literary club.
New York State Board of Women Managers, Albany; folios of articles of the press.
New York State Board of Women Managers, Albany; library, 2,500 vols.

GROUP 156.— SOCIAL AND INDUSTRIAL ASSOCIATIONS.

Afro-American Woman's exhibit (J. Imogen Howard), New York; embroidery.
Charity organizations, Buffalo; penny saving fund.
Independent Order of Treue Schwestern, New York; charts showing results.
Sisters of Personal Service, New York; charts showing scope.

GROUP 157.— RELIGIOUS ORGANIZATIONS.

American Bible Society, New York; bibles and testaments.
American Tract Society, New York; evangelical publications.
Methodist Book Concern, New York; publications of the Methodist church.
National Temperance Society and Publishing House, New York; books, publications, etc.
Seventh Day Baptist denomination, Alfred Center; books, papers, etc.

GROUP 158.— MUSIC AND MUSICAL INSTRUMENTS.

Automatic Piano Co., New York; pianos and automatic attachments.
Bacon, Francis, New York; pianos.
Behr Bros. & Co., New York; pianos.
Boardman & Gray, Albany; pianos.
Coleman, Henry, New York and Philadelphia; brass musical instruments.
Dolge, Alfred, & Sons, New York; sound boards, English felt for polishing, hammer felts, board and piano cases, piano and organ felts.
Estey Piano Co., New York; pianos.
Fischer, J. & C., New York; pianos.
Foot, J. Howard, New York and Chicago; Badger Bochm flutes.
Foot, J. Howard, New York and Chicago; collective exhibit band instruments.

Foot, J. Howard, New York and Chicago; guitars and mandolins.
Freidrich, John, & Bro., New York; violins, violas, etc.
Gemunder, Augustus, & Sons, New York; violins, etc.
Hardman, Peck & Co., New York; pianos.
Hartmann Bros. & Reinhard, New York; musical instruments.
Hays, Harriet H., Chicago and New York; musical compositions.
Jacob Bros., New York; pianos.
Kranich & Bach, New York; pianos.
Mannello, Angelo, New York; mandolins and mandelas.
Meneely (Clinton H.) Bell Co., Troy; chiming bells.
Rogers, Jos., Jr., Highview; banjo and drum heads.
Sohmer & Co., New York; pianos.
Schubert Piano Co., New York; pianos.
Strauch Bros., New York; piano actions.
Waterloo Organ Co., Waterloo; pianos.
Wegman & Co., Auburn; pianos.
Wessell, Nickel & Gross, New York; piano actions.
Zimmerman, C. T., & Co., Dolgeville; violins.
Zimmerman, C. T., & Co., Dolgeville; autoharps.
Zimmerman, C. T., & Co., Dolgeville; new system of music.

The foregoing list of awards to exhibitors from New York has been carefully compared with the records in this department and is correct.

J. H. McGIBBONS,
Per J. B. S.,
*Chief of Department of Liberal Arts.*

# AWARDS GRANTED NEW YORK EXHIBITS IN DEPARTMENT M, ETHNOLOGY.

Agassiz Association, New York; book to illustrate a MSS. Geological map of New York city and vicinity.

American Museum of Natural History, New York; plans and view of the American Museum of Natural History.

Catlin, Mrs. Louise; pictures of Indian life.

De Potter, Armand, Albany; collection of Egyptian antiquities.

Felt & Tarrant Mfg. Co.; comptometer.

Hart, William W., & Co.; taxidermy.

Kuarnerd & Harrow; "The Manufactures of the United States."

Kunz, George, with Tiffany & Co., New York; precious stones and minerals with folklore significance.

Lattin, F. H., & Co., Albion; typical collection of N. A. birds showing manner of nesting; naturalists' supplies.

State of New York, Albany; Iroquois village of bark houses, mammals, land shells, fresh water shells, colonial exhibit, historical collection.

Robeson, Mrs. Wm. R., Albany; large sized drawing of coat of arms of Columbus.

Tieman, George, & Co.; apparatus for athletics.

Tiffany & Co., New York; archæological collections.

Ward, Henry A., Rochester; papier maché model of human body.

Ward's Natural Science Establishment, Rochester; Pueblo de Taos, paleontology, cases, invertebrate zoology (comparative), paleontology, vertebrate zoology (comparative).

Webb's Adder Co.; Webb's adder.

Zoaring, H. H.; bronze relief portrait of Columbus.

The foregoing list of awards to exhibitors from New York has been carefully compared with the records of this department and is correct.

H. W. CANNON,

*February* 19, 1894. *Chief of Department of Ethnology.*

SCIENTIFIC SCHOOLS PRATT INSTITUTE

# AWARDS GRANTED NEW YORK EXHIBITS IN DEPARTMENT N, FORESTRY.

GROUP 19.

Jessup, Morris K., New York; collection of forest botanical woods.

Hough, Romeyn B., Lowville; folio collection of American woods.

State of New York; collection of tree sections, photographs, etc.

United Indurated Fibre Co., Lockport; pails.

The foregoing list of awards to exhibitors from New York has been carefully compared with the records in this department and is correct.

J. S. BROWNING,

*March* 21, 1894. *Chief of Department of Agriculture in Charge of Forestry.*

# FINANCIAL REPORT.

By GEORGE S. STEVENS.

Appropriations: under chapter 236, Laws of 1892, $300,000; chapter 188, Laws of 1893, $300,000.

Special appropriation for Board of Women Managers, chapter 726, Laws of 1893, $10,000.

Bills audited by the Commission were itemized and verified, with vouchers attached, as directed by letter of the Comptroller and by circular of instructions issued by the chief executive officer. (See Assembly Document No. 70, 1893.)

Bills of each judicial district commission were approved by two of the three district commissioners, and bills in each exhibit were certified by the head of that department.

All bills paid, with vouchers attached, are on file in the office of the Comptroller.

In response to a resolution of the Assembly an itemized cash account report was made to the date of March 20, 1893, and pursuant to chapter 236, Laws of 1892, section 5, an itemized account of all expenditures up to May 2, 1893, inclusive, was filed in the office of the Comptroller.

The members of the Board of General Managers and of the Judicial District Commissions served without salary, but were allowed traveling and other necessary expenses when in actual service of the State

## EXPENDITURES.

| 1892. | | | |
|---|---|---|---|
| April | 20. | Walter L. Sessions, general manager, traveling expenses .... | $41 27 |
| | 29. | Walter L. Sessions, general manager, traveling expenses. ... | 32 37 |
| | | Louis M. Howland, general manager, traveling expenses.... | 121 28 |
| May | 4. | Walter L. Sessions, general manager, traveling expenses..... | 35 34 |
| | 5. | Donald McNaughton, chief executive officer, salary, April 18-30..... | 192 30 |
| | | Donald McNaughton, chief executive officer, expenses..... | 25 96 |
| | | John Foord, secretary, salary, April 19 to May 2 ..... | 115 38 |
| | | John Foord, secretary, traveling expenses..... | 37 50 |
| | 18. | Walter L. Sessions, general manager, traveling expenses..... | 41 67 |
| | 28. | Walter L. Sessions, general manager, traveling expenses.... | 58 80 |
| | | John Boyd Thacher, general manager, traveling expenses.... | 51 30 |
| | | John Foord, secretary, traveling expenses..... | 45 00 |
| | | Gorton W. Allen, general manager, expenses to April 30 .... | 36 60 |
| | | Gorton W. Allen, general manager. expenses to May 26..... | 61 80 |
| | | Louis M. Howland, general manager, traveling expenses, Chicago, April 28 to May 26..... | 218 50 |
| June | 2. | John Foord, secretary, salary, May 3-31..... | 234 62 |
| | 8. | Donald McNaughton, chief executive officer, salary, May.... | 416 66 |
| | | W. L. Sessions, traveling expenses..... | 82 42 |
| | 10. | L. M. Howland, traveling expenses, Chicago..... | 188 53 |
| | | John Foord, secretary, traveling expenses, Washington, D. C. | 54 80 |
| | 16. | G. T. Smith, clerk, 8th district, salary, May 21 to June 15... | 85 48 |
| | 18. | Donald McNaughton, chief executive officer, paid transportation bills, etc., general managers and district commissioners and officers to Chicago and return..... | 1,200 35 |
| | 20. | John T. Norton, commissioner, 3d district, traveling expenses. | 15 15 |
| | 28. | Donald McNaughton, chief executive officer, paid bills of postage, stationery, books, office supplies, expenses, etc. | 109 30 |
| | 29. | Henry Bradley, labor bill, trees for Forestry Building..... | 429 55 |
| | 30. | John Foord, secretary, salary, June..... | 250 00 |

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|---|---|---|---|
| June | 30. | P. T. Wall, clerk, salary, April 28 to June 15, $311.33; traveling expenses, $40.35 | $353 68 |
| | | Sessions & Sessions, legal services, contracts, etc. (State Building) | 200 00 |
| | | Footing to July, 1892. | $4,736 11 |
| July | 1. | Donald McNaughton, chief executive officer, salary, June | 416 68 |
| | | Clara E. Brown, stenographer, general managers, May 3–14. | 30 00 |
| | | Walter L. Sessions, general manager, expenses, June 9–29 | 79 40 |
| | | Henry Stowell, commissioner, 7th district, traveling expenses, April 28 to June 22 | 54 66 |
| | | Wm. H. Rowe, Jr., commissioner, 3d district, expenses | 13 45 |
| | | Wm. S. Kimball, commissioner, 7th district, expenses | 38 54 |
| | | George S. Stevens, clerk, 3d district, salary and expenses | 159 46 |
| | | Edwin C. Cook, commissioner, 7th district, traveling expenses, April 19 to June 6 | 44 00 |
| | 8. | James W. Tappin, commissioner, 1st district, traveling expenses, Chicago, Washington, etc | 127 30 |
| | | Richard Delafield, commissioner, 1st district, traveling expenses, Chicago, Washington, etc | 223 29 |
| | | Donald McNaughton, chief executive officer, bills paid for expenses in General, Women's and various district boards. | 528 22 |
| | 11. | Florence C. Ives, chief officer, Women's Board, salary to June 30, $133.33; expenses, $2.84 | 136 17 |
| | | Minnie A. Parks, stenographer, May 9 to June 30 | 88 67 |
| | | Anna M. Parks, stenographer, May 1 to June 30 | 102 00 |
| | | Ida V. Burch, stenographer, May 23 to June 30 | 72 00 |
| | | W. L. Sessions, general manager, traveling expenses | 12 15 |
| | 15. | P. T. Wall, clerk, salary account, $200; expenses, $14.55 | 214 55 |
| | 16. | W. B. Mattice, commissioner, 3d district, expenses and bills. | 28 06 |
| | 19. | W. L. Sessions, general manager, traveling expenses, July 13. | 36 14 |
| | | Charles H. Derrick, clerk, salary, May 16 to June 30 | 92 00 |
| | | W. L. Sessions, general manager, traveling expenses, July 19. | 30 69 |
| | | H. S. Estcourt, clerk, 4th district, salary, May 28 to July 1 | 112 90 |
| | 20. | John Foord, secretary, traveling expenses, Washington, D. C. | 111 61 |
| | | L. M. Howland, general manager, expenses, June 7–19 | 64 76 |
| | | Chas. M. Lang, official seal of Board of General Managers | 90 00 |
| | | Jas. W. Tappin, commissioner and treasurer, 1st district, to pay sundry bills of salaries of office force from June 1 to July 1, $387.34; bills of rent, advertising, office expenses, $1,060.57; bills for office furniture and fittings, $588.85 | 2,036 76 |
| | 21. | H. S. Estcourt, clerk, 4th district, bills for salaries of stenographer, $40; printing, office furniture and supplies, etc. | 145 28 |
| | 26. | Donald McNaughton, chief officer, salaries of clerk and stenographer, 7th district, to June 30, $199.33; notary's bill, $3. | 202 33 |
| | | Gorton W Allen, gen'l manager, expenses, May 31 to July 19. | 107 46 |
| | | Footing to August, 1892 | $10,134 64 |
| Aug. | 1. | Chas. C. Van Kirk, clerk, 6th district, salary to June 1, $33.33, and expenses, $12.30 | 45 63 |
| | 2. | Donald McNaughton, chief executive officer, bills of Board of Women Managers, official trip, Chicago, M. C. R. R. | 276 78 |
| | | John Foord, secretary, salary, July | 250 00 |
| | 3. | Ida V. Burch, stenographer, salary, July, General Board | 56 00 |
| | 4. | W. L. Sessions, general manager, traveling expenses | 37 80 |
| | 5. | McKim, Mead & White, architects' commission on New York State Building, Chicago, 2 1-2 per cent, $77,600 | 1,940 00 |
| | | Anna I. Jennyss, stenographer, Women's Board, and expenses. | 19 05 |
| | | John Boyd Thacher, general manager, traveling expenses, April 21 to June 17 | 106 25 |
| | | J. S. Lang, rubber stamps | 2 85 |
| | | Photo. Chrome Engraving Co., engraving of State Building. | 11 00 |
| | | Donald McNaughton, chief executive officer, salary, July | 416 67 |
| | | Anna M. Parks, stenographer, General Board, salary, July | 50 00 |
| | | Minnie A. Parks, stenographer, General Board, salary, July | 50 00 |
| | | C. H. Derrick, clerk, General Board, salary, July | 70 00 |

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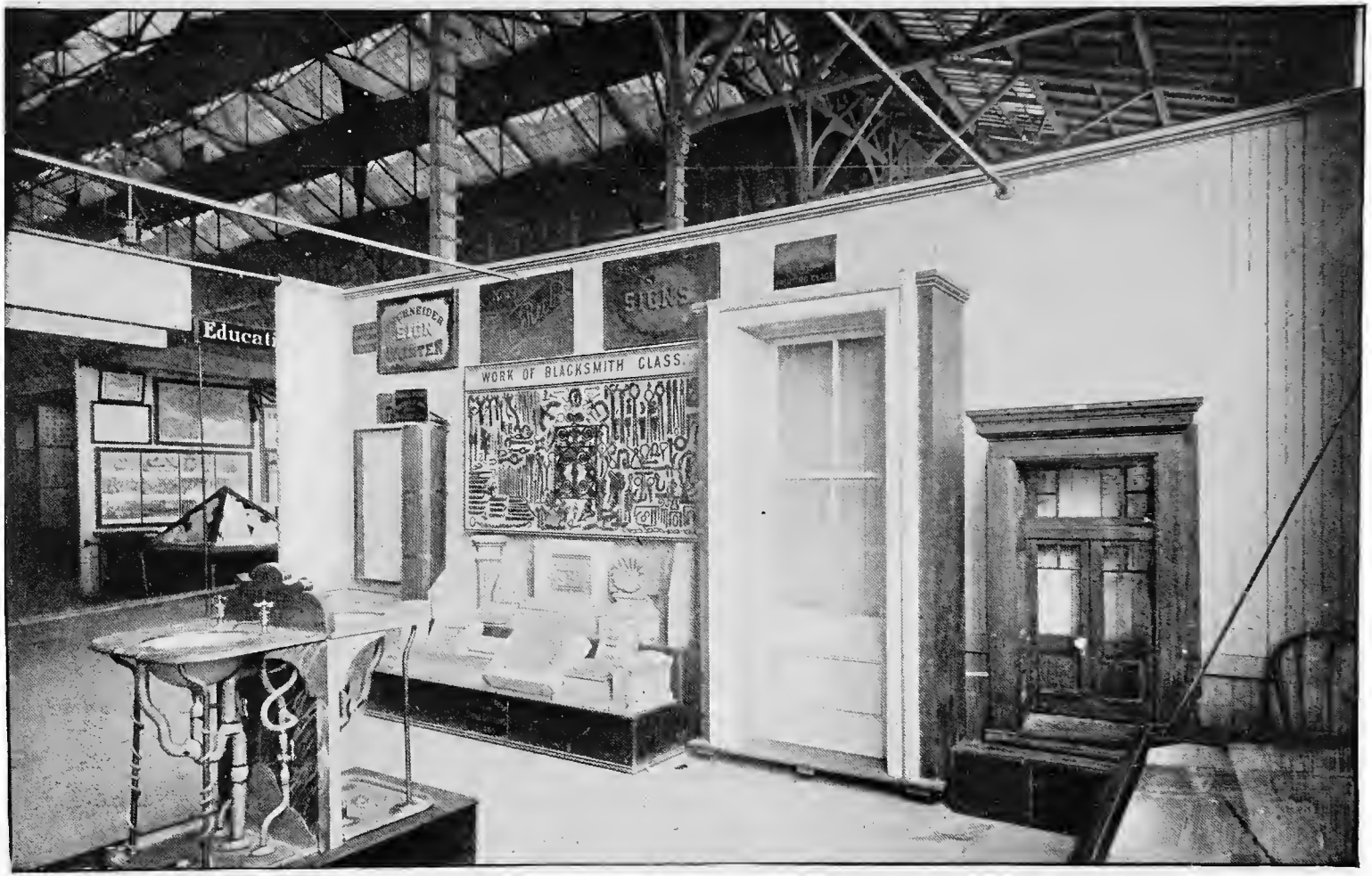
|---|---|---|---|
| Aug. | 5. | Florence C. Ives, chief officer, Women's Board, salary, July. | $166 66 |
| | | Albany News Co., office supplies | 49 50 |
| | 9. | Henry Stowell, printing bill, 7th district | 24 00 |
| | | National Express Co., amount for June | 6 35 |
| | | Scrantom, Wetmore & Co., stationery and printing | 164 23 |
| | 10. | Hudson Valley Paper Co., stationery | 4 88 |
| | | American Express Co., bill for May | 12 97 |
| | | R. G. Dun & Co., lists of manufacturers, 3d district | 30 00 |
| | | Western Union Telegraph Co., bills of Women's Board, June, General Board of May and July, $8.70, $12.45 and $39.05 | 60 20 |
| | 11. | Saratoga Sun, printing, 4th district | 5 00 |
| | | W. B. Kirk, rent, 5th district, June and July | 60 00 |
| | | Lena P. Bennett, clerk, acting, June and July | 150 00 |
| | | Moser & Lyon, stationery bill, 5th district | 28 88 |
| | | Hall & McChesney, printing bill, 5th district | 34 75 |
| | | John Foord, secretary, expenses, Washington, July 20–30 | 87 63 |
| | | W. H. Benjamin, clerk, 7th district, salary, July | 100 00 |
| | | H. V. Cronin, stenographer, 7th district, salary, July | 50 00 |
| | | Lang Rubber Stamp Works | 1 00 |
| | | G. S. Stevens, clerk, 3d district, salary account | 120 00 |
| | | Post-Express Printing Co., printing, May 25 to June 15 | 68 25 |
| | | National Express Co., bill, July | 1 95 |
| | | R. M. Meyer & Co., stationery, April 26 to August 6 | 81 35 |
| | | Donald McNaughton, printing bill, 5th district | 43 00 |
| | 12. | John M. Fake, assistant clerk, 4th district, salary, July | 52 00 |
| | | S. E. Van Buren, stenographer, 4th district, salary, July | 25 00 |
| | | Western Union Telegraph Co., bill for June | 82 40 |
| | | Postal Telegraph Cable Co., bill for May | 9 72 |
| | | Margaret Tomes, salary to August 1, $41.67; traveling and other expenses, $20.90 | 62 57 |
| | 13. | H. S. Escourt, clerk, 4th district, salary, July, $100; traveling and other expenses, $28.61 | 128 61 |
| | 16. | Florence C. Ives, office supplies, Women's Board, expenses | 28 01 |
| | | Syracuse Journal, advertising account, 5th district | 25 50 |
| | | News Publishing Co., Syracuse, advertising, 5th district | 20 00 |
| | | Courier Printing Co., Syracuse, advertising, 5th district | 6 00 |
| | | The Herald Co., Syracuse, advertising, 5th district | 16 50 |
| | | W. H. Benjamin, office expenses, 7th district | 15 05 |
| | 17. | W. L. Sessions, traveling expenses | 46 23 |
| | 19. | F. D. Shea, typewriter (Yost) and supplies | 102 30 |
| | | Geo. T. Smith, clerk, 8th district, office supplies | 4 87 |
| | | Geo. T. Smith, clerk, 8th district, salary account | 100 00 |
| | | Peter Paul & Bro., stationery, 8th district | 3 72 |
| | | Moore, Campbell & Kellner, rent, 8th district, two months, to August 1, $70; janitor, $2.50 | 72 50 |
| | | Halblant & Philcox, lettering, 8th district, office | 7 50 |
| | | F. C. Manning, stationery, General and Women's Board | 206 60 |
| | | Metropolitan Telephone and Telegraph Co., bill, 1st district, June and July | 41 10 |
| | | F. W. Maxson, rubber stamps | 2 50 |
| | | American Express Co., bill, June and July | 26 57 |
| | | Postal Telegraph Cable Co., bill, June and July | 6 33 |
| | | R. H. Thurston, commissioner, 6th district, expenses | 27 00 |
| | | W. & J. Sloane, rugs, 1st district, office | 68 68 |
| | | Louis M. Howland, general manager, traveling expenses, Chicago, July 20 to August 11 | 160 74 |
| | | Donald McNaughton, bill for telegraphing; vouchers | 10 65 |
| | | Donald McNaughton, chief executive officer, paid expenses of committee of Women's Board, Chicago trip; vouchers | 122 55 |
| | | The Argus Co., printing, General and eight district boards | 78 00 |
| | | The Argus Co., printing, June 3 to July 25, General, Women and district boards | 195 20 |
| | | The Argus Co., printing, June 23–30, Women's Board | 140 30 |
| | | The Argus Co., printing, July 7–25, Women's Board | 18 25 |
| | 20. | P. T. Wall, salary account, $200; postage, etc., paid, $10.35. | 210 35 |
| | | John H. Larkin, salary to August 18 | 37 50 |




NEW YORK TRADE SCHOOL

| | | | |
|---|---|---|---|
| Aug. | 23. | John Phillips, clerk, 2d district, salary, May 28 to July 31 .. | $254 03 |
| | | Edmund C. Stanton, clerk, 1st dist., salary, June 26 to July 31. | 248 65 |
| | | Geo. Niedhardt, clerk, 1st dist., salary, June 28 to Aug. 23. | 21 00 |
| | | T. F. Farrell, clerk, 2d district, salary, June and July..... | 400 00 |
| | | W. F. Stetler, stenographer, 1st dist., salary, June 30 to Aug. 20 | 130 00 |
| | | Geo. Tomes, clerk, 1st district, salary, July 2 to August 13.. | 125 00 |
| | | W. H. Williams, messenger, 7th district, salary, June 2–30.. | 16 00 |
| | | Brooklyn Citizen, advertising, 2d district..... | 22 50 |
| | | Brooklyn Daily Times (Peters & Co.), advertising, 2d district. | 18 00 |
| | | Brooklyn Freie Presse, advertising, 2d district..... | 18 00 |
| | | Brooklyn Standard Union, advertising, 2d district ..... | 18 00 |
| | | Brooklyn Daily Eagle, printing, advertising, 2d dist., June 6. | 117 50 |
| | | Brooklyn Daily Eagle, advertising, June 14–21, 2d district .. | 23 00 |
| | | Wm. Schwarzwaelder & Co., office desks, furniture, 2d district. | 273 50 |
| | | Henry Siebert, commissioner, postage, 2d district..... | 40 00 |
| | | Fulton Sign Co., signs, 2d district..... | 46 62 |
| | | Rapid Addressing Machine Co., 2d district, June 24..... | 19 85 |
| | | Rapid Addressing Machine Co., 1st district, June 30..... | 57 00 |
| | | Geo. P. Rowell Adv. Co., advertising contract, 2d district... | 106 75 |
| | | Thomas Cassin, office, 2d district, linoleum..... | 73 50 |
| | | John M. Balwinkle, office supplies, 2d district, June 24..... | 15 85 |
| | | John M. Balwinkle, office supplies, 2d district, June 20..... | 23 65 |
| | | Pusey & Troxell, office supplies, 1st district, June 1–29..... | 92 11 |
| | | L. B. Tupper, janitor and supplies, 1st district, July 1..... | 30 40 |
| | | T. J. Whitney, commissioner, 4th district, traveling expenses. | 109 93 |
| | | R. G. Dun & Co., list manufacturers, 4th district..... | 75 00 |
| | | Hinman & Bolton, signs, 5th district..... | 3 00 |
| | | Utica Daily Press, advertising, 5th district..... | 1 50 |
| | | Smith Premier Typewriting Co., furniture, 5th district..... | 30 00 |
| | | C. W. Sears, office supplies, 6th district..... | 21 60 |
| | | Binghamton Leader Publishing Co., printing, 6th district.... | 131 25 |
| | | Union & Advertiser Co., printing, General Board..... ..... | 39 00 |
| | | Edwin C. Cook, commissioner, 7th district, traveling expenses. | 50 30 |
| | | W. H. Benjamin, clerk, 7th district, office expenses..... | 36 45 |
| | | V. M. Burley, caligraph, 7th district..... . | 25 00 |
| | | Cyrus Strong, rent, 6th district, June..... | 31 50 |
| | | B. S. Curran, Jr., stenographer, 6th dist., June 20 to July 1. | 25 00 |
| | | C. D. Barnes, janitor, 6th district, May and June..... ..... | 10 00 |
| | | Elbridge Gay, lock, 6th district..... | 3 10 |
| | | Chas. E. Morris, office supplies, 7th district..... | 9 81 |
| | | E. E. Bausch & Son, advertising lecture, 7th district..... | 26 00 |
| | | W. W. Rundel, picture frames, 7th district..... | 4 60 |
| | | Estate M. F. Reynolds, rent, 7th district ..... | 18 50 |
| | | Whittle Bros., decorating assembly parlor, Women's Board.. | 25 00 |
| | | Capital District Telegraph Co., service, May, June and July. | 6 92 |
| | | American Express Co., bill, July..... | 9 55 |
| | | Postal Telegraph Cable Co., bills, June and July ..... | 63 80 |
| | | Mrs. Leslie Pell-Clarke, Women's Board, expenses and bills. | 30 38 |
| | | Hudson River Telephone Co., bill of May, June and July... | 50 83 |
| | | Recorder Publishing Co., advertising, 5th district..... | 5 94 |
| | | J. L. Kyne, East Syracuse News, advertising, 5th district.... | 5 60 |
| | | J. Coughlan, Watertown Herald, advertising, 5th district.... | 9 00 |
| | | Brockway & Son, Watertown Times, advertising, 6th district. | 23 00 |
| | | Beers & Kessinger, Rome Sentinel, advertising, 5th district.. | 13 50 |
| | 27. | Consolidated Transfer Co., carriage account, Women's Board. | 19 50 |
| | | Donald McNaughton, salary bills, 1st dist., week ending Aug. 6. | 58 00 |
| | | Donald McNaughton, expenses of committees, Women's Board. | 114 37 |
| | | Geo. Tomes, clerk, 1st district, August 13–20..... | 25 00 |
| | | C. S. & G. C. Lester, legal services, contract Women's Board. | 15 00 |
| | 30. | Courier Co., Buffalo, printing, June 11–15, 8th district..... | 43 28 |
| | | Peter Paul & Bro., office supplies, 8th district..... | 3 40 |
| | | F. Todd Patterson, traveling expenses, Women's Board..... | 34 15 |
| | | D. & M. Chauncey Co., rent, second district office, June 15 to August 1..... | 166 67 |
| | | Brooklyn Daily Eagle, printing, 2d district..... | 14 50 |
| | | George V. Benson, picture frames, 8th district..... | 10 00 |

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| Aug. 30. | H. I. Knickerbocker, drawing, Women's Board | $10 | 00 |
| | Oswego Publishing Co., advertising, 5th district | 41 | 00 |
| | Footing to September, 1892 | $20,619 | 41 |
| Sept. 2. | Henry Romeike, press records | 8 | 55 |
| | George S. Stevens, clerk, 3d district, salary account, $120; bills paid, $1.46 | 121 | 46 |
| | P. T. Wall, clerk, salary account, $100; expenses, $11.75 | 111 | 75 |
| | R. Fleming, boy, salary, July 4 to August 31 | 25 | 00 |
| | I. V. Burch, stenographer, salary, August | 60 | 00 |
| | John Foord, secretary, salary, August | 250 | 00 |
| | Anna I. Jennyss, stenographer, salary, Women's Board | 40 | 00 |
| | Florence C. Ives, chief officer, salary, Women's Board | 166 | 66 |
| | John H. Larkin, clerk, salary to August 31 | 20 | 26 |
| | T. F. Farrell, clerk, 2d district, salary, August | 200 | 00 |
| | John Phillips, clerk, 2d district, salary, August | 125 | 00 |
| | Edmund C. Stanton, clerk, 1st district, bill, salary account | 50 | 00 |
| | P. J. Cuskley, rent of office, 1st district | 200 | 00 |
| 8. | Wm. H. Burtis, printing, General Board | 3 | 00 |
| | Brandow Printing Co., printing, General Board | 7 | 40 |
| | H. O'Neill & Co., office fittings, Women's Board | 69 | 93 |
| | Rapid Addressing Machine Co., labor, 8th district | 10 | 00 |
| | E. C. Bridgman, State map, judicial districts | 15 | 00 |
| | National Express Co., bill for August | 8 | 59 |
| | P. J. Cuskley, office rent, Women's Board, to September 1 | 56 | 43 |
| | Hudson River Telephone Co., bill for August | 13 | 54 |
| | Donald McNaughton, chief executive officer, salary, August | 416 | 67 |
| | John M. Fake, clerk, 4th district, salary, ust | 54 | 00 |
| | S. E. Van Buren, stenographer, 4th district lary, August | 20 | 00 |
| | H. V. Cronin, stenographer, 7th district, salary, August | 50 | 00 |
| | W. H. Benjamin, clerk, 7th district, salary, August | 100 | 00 |
| | Wm. Green, clerk, 1st district, salary, August 6-31 | 35 | 00 |
| | W. F. Stetler, stenographer, 1st district, salary, August 20-31 | 30 | 00 |
| | Geo. Tomes, clerk, 1st district, salary, August 20-31 | 37 | 50 |
| | Edmund C. Stanton, clerk, 1st district, office bills, to August 29 | 38 | 40 |
| | Edmund C. Stanton, clerk, 1st district, for August | 208 | 33 |
| | R. B. Hough, traveling expenses, Forestry | 87 | 26 |
| | H. Koons, commissioner, 8th district, traveling expenses | 42 | 87 |
| | H. W. Box, commissioner, 8th district, traveling expenses | 42 | 87 |
| | Margaret Tomes, clerk, Women's Board. salary, $102.33, and bills paid, $15.08 | 117 | 41 |
| | G. T. Smith, traveling expenses, 8th district | 28 | 58 |
| | H. S. Estcourt, 4th district, salary, $100, August; bills, $26.02 | 126 | 02 |
| | F. O. Howard, 6th district, salary, $75, August; bills, $11.15 | 86 | 15 |
| 13. | Minnie A. Parks, stenographer, salary, August | 50 | 00 |
| | Anna M. Parks, stenographer, salary, August | 50 | 00 |
| | Mrs. Leslie Pell-Clarke, traveling expenses, Women's Board | 29 | 23 |
| | E. C. Stanton, 1st district, office expenses, July | 42 | 14 |
| | C. W. Sears, 6th district, office supplies | 22 | 50 |
| | Juliet Corson, traveling expenses, Women's Board | 17 | 75 |
| | Courier Printing Co., Syracuse, 5th district, advertising | 1 | 50 |
| | Moser & Lyon Co., Syracuse, 5th district, office supplies | 1 | 45 |
| | The Argus Co., printing, August 3-30, Women's Board | 47 | 00 |
| | The Argus Co., printing, August 1-25, General Board | 134 | 45 |
| | Mrs. J. S. T. Stranahan, traveling expenses | 17 | 95 |
| | Hall & McChesney, envelopes, 5th district | 2 | 25 |
| | Mrs. F. P. Bellamy, traveling expenses, Women's Board | 25 | 92 |
| | Boyd Directory Co., book | 3 | 50 |
| | Utica Daily Press Co., advertising, 5th district | 21 | 25 |
| | C. W. Clare, Watertown Re-Union, advertising, 5th district | 10 | 00 |
| | P. E. Kelly, Utica Sunday Tribune, advertising, 5th district | 10 | 00 |
| | Lena P. Bennett, clerk, salary for August | 100 | 00 |
| | American Express Co., bill for August, Women's Board | 6 | 18 |
| | F. D. Shea, typewriter supplies | 15 | 50 |
| | American Express Co., bill, General Board | 26 | 32 |
| | Cyrus Strong, rent of office, 6th district, July and August | 50 | 00 |

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| Sept. | 13. | H. Duffy, commissioner, 6th district, traveling expenses..... | $66 86 |
| | | F. J. Root, 6th district, office lighting..... | 9 15 |
| | | Donald McNaughton, paid twelve bills, in General, Dairy and Indian Boards..... | 236 00 |
| | | Donald McNaughton, paid six bills, Women's Board..... | 152 63 |
| | | Moore, Campbell & Kellner, rent, office, 8th district, August. | 40 00 |
| | | W. B. Kirk, office, 5th district, rent, August..... | 30 00 |
| | | National Press Intelligence Co., press records, Women's Board..... | 5 20 |
| | | W. T. Ransom, commissioner, 8th district, traveling expenses. | 73 65 |
| | | Henry Stowell, commissioner, 7th district, traveling expenses. | 51 49 |
| | | H. Romeike, press records..... | 5 79 |
| | 14. | Geo. A. Fuller Co., payment on State Building..... | 24,000 00 |
| | 20. | Mrs. C. F. Wadsworth, expenses, Women's Board..... | 27 66 |
| | | J. Imogen Howard, expenses, Women's Board..... | 17 05 |
| | | C. P. Penfield, office stationery, 4th district..... | 6 65 |
| | | F. L. Underhill, clerk, Agricultural Bureau, salary, August. | 125 00 |
| | | Standard Publishing Co., advertising, 5th district..... | 44 40 |
| | | Postal Telegraph Cable Co., bill for August..... | 11 48 |
| | | Fire Extinguisher Manufacturing Co., extinguishers for New York State Building..... | 300 00 |
| | | Western Union Telegraph Co., bill for August..... | 53 85 |
| | | John H. Larkin, clerk, salary, September 1–15..... | 37 50 |
| | | Mrs. George Waddington, traveling expenses..... | 28 75 |
| | | Smith & Clonney, frames, etc., 6th district..... | 8 20 |
| | | McElroy & Fancher, furniture, 6th district..... | 7 50 |
| | | C. D. Barnes, janitor, July and August, 6th district..... | 20 00 |
| | | G. T. Smith, clerk, 8th district, salary, July 15 to September 1, $150, and bills, $4.02..... | 154 02 |
| | | B. S. Curran, clerk, 6th district, salary, July and August, $150, and bills, $10.15..... | 160 15 |
| | | Josiah Shull, traveling expenses, Dairy..... | 6 68 |
| | | Mrs. Leslie Pell-Clarke, traveling expenses, Women's Board. | 7 60 |
| | | Miss C. E. Dennis, traveling expenses, Women's Board..... | 18 65 |
| | | Palladium Printing Co., advertising, 5th district..... | 49 00 |
| | | Utica Deutsche Zeitung Co., advertising, 5th district..... | 18 00 |
| | | C. W. Miller, livery account, 8th district..... | 2 00 |
| | 30. | F. O. Howard, 6th dist., salary, Aug. $83.33; expenses, $13.60.. | 96 93 |
| | | Frances T. Patterson, traveling expenses, Women's Board... | 18 10 |
| | | Mrs. W. J. Averell, traveling expenses, Women's Board..... | 15 84 |
| | | Emily Huntington, traveling expenses, Women's Board..... | 9 85 |
| | | Geo. Tomes, clerk, 1st district, salary, September 1–24..... | 87 59 |
| | | W. F. Stetler, stenographer, 1st district, salary, September 24. | 70 00 |
| | | Wm. Green, clerk, 1st district, salary, September 24..... | 35 00 |
| | | Geo. Neidhardt, boy, 1st district, salary, September 24..... | 10 50 |
| | | Columbian Celebration Committee, New York city..... | 10,000 00 |
| | | Mrs. Leslie Pell-Clarke, traveling expenses, Women's Board. | 7 10 |
| | | Miss C. E. Dennis, traveling expenses, Women's Board..... | 12 00 |
| | | Eastman Kodak Co,, photographs..... | 20 50 |
| | | Donald McNaughton, eleven bills paid..... | 103 96 |
| | | John Foord, secretary, traveling expenses..... | 40 00 |
| | | Footing to October, 1892..... | $60,700 12 |
| Oct. | 4. | Florence C. Ives, Women's Board, salary, September, $166.66; expenses, $12.40..... | 179 06 |
| | | G. S. Stevens, 3d district, salary $120; bills paid, $11.31..... | 131 31 |
| | | John Foord, secretary, salary, September..... | 250 00 |
| | | Donald McNaughton, September salary..... | 416 66 |
| | | John Larkin, clerk, September 16–30, salary..... | 37 50 |
| | | Mrs. Ralph Trautman, traveling expenses, Women's Board.. | 8 45 |
| | | Mrs. Leslie Pell-Clarke, traveling expenses, Women's Board. | 7 95 |
| | | D. & M. Chauncey Co., office rent, 2d district, September... | 66 67 |
| | | P. J. Cuskley, agent, rent office, September, Women's Board. | 83 33 |
| | | Geo. A. Fuller Co., payment New York State Building. ... | 17,650 00 |
| | | John Phillips, clerk, 2d district, salary to October 1..... | 137 09 |
| | | Thos. F. Farrell, clerk, 2d district, salary to October 1..... | 200 00 |

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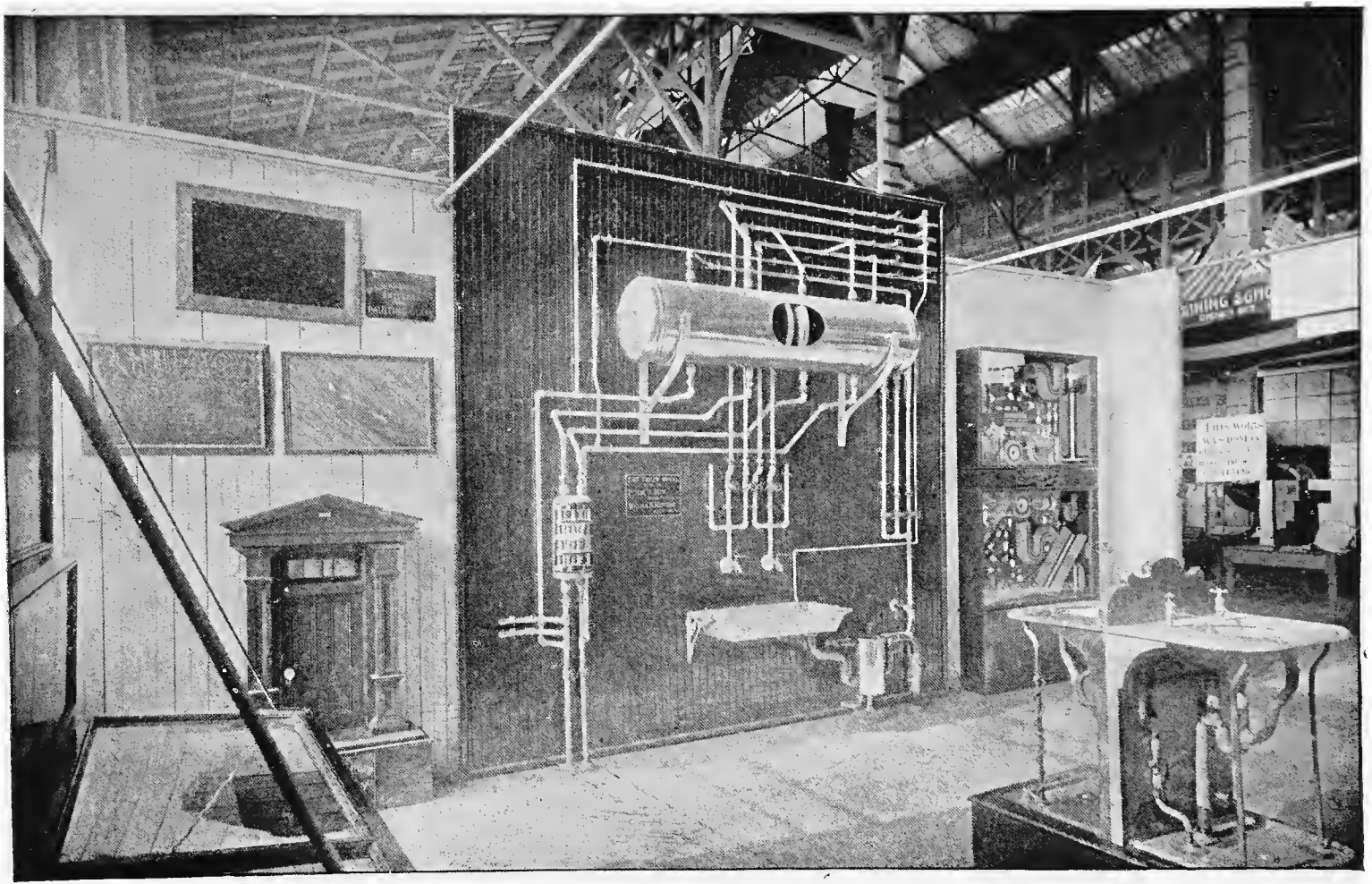
|---|---|---|---|
| Oct. | 4. | New York and New Jersey Telephone Co., 2d district, three months to September 30 | $42 92 |
| | | Tiffany & Co., engraving and stationery, 1st district office | 255 00 |
| | | American Telephone Booth Co., telephone booth, 1st district | 151 60 |
| | 5. | Minnie A. Parks, stenographer, salary, September | 52 00 |
| | | Anna M. Parks, stenographer, salary, September | 52 00 |
| | | I. V. Bureh, stenographer, salary, September | 54 00 |
| | | Anna I. Jennyss, stenographer, salary, Women's Board | 50 00 |
| | | Miss M. M. Love, traveling expenses, Women's Board | 26 30 |
| | | Harper & Bros., printing pictures, New York State Building | 35 00 |
| | | H. V. Cronin, stenographer, 7th district, September | 50 00 |
| | | Wm. H. Benjamin, clerk, 7th district, salary, September | 100 00 |
| | | F. L. Underhill, clerk, Agriculture, salary, September | 125 00 |
| | | James Wood, traveling expenses, Agriculture and bills | 186 12 |
| | 8. | W. L. Sessions, auditor, traveling expenses | 46 66 |
| | | W. G. Mitchell, advertising expenses, 7th district | 7 50 |
| | | W. B. Kirk, office, 5th district, rent, September 1 | 30 00 |
| | | J. W. Sanborn, superintendent Ethnology, salary, September, $125; expenses and bills paid, $28.30 | 153 30 |
| | | C. P. Meade, engrossing, 5th district | 15 00 |
| | | National Express Co., bill, September | 6 34 |
| | 26. | Adams & Hodgman, livery bill, 4th district | 22 00 |
| | | S. E. Van Bureu, stenographer, 4th district, salary to Oct. 1 | 50 00 |
| | | John M. Fake, clerk, 4th district, salary, September | 52 00 |
| | | H. S. Estcourt, clerk, 4th dist., salary, $100; expenses, $18.63 | 118 63 |
| | | L. Ingalls, advertising, 5th district | 11 25 |
| | | Moore, Campbell & Kellner, office rent, 8th dist., September | 35 00 |
| | | W. H. Abbott, photographs, 5th district | 3 00 |
| | | Mrs. F. P. Bellamy, traveling expenses | 14 32 |
| | | Geo. T. Smith, clerk, 8th district, September salary | 100 00 |
| | | W. H. Gilbert, traveling expenses, Dairy | 72 56 |
| | | Hudson River Telephone Co., September bill | 22 34 |
| | | Jesse M. Sweeney, stenographer | 6 00 |
| | | R. Fleming, office boy, salary, September | 13 00 |
| | | G. T. Powell, traveling expenses and bills paid, Horticulture | 94 15 |
| | 27. | Margaret Tomes, clerk, Women's Board, salary account, $108.33; other bills, $80.09 | 188 42 |
| | | E. N. Doubleday, photograph account, 4th district | 77 85 |
| | 31. | J. F. Hawkins, clerk, 6th district, salary, September, $100; bills and traveling expenses, $20.55 | 120 55 |
| | | Hez. Bowen, Agricultural department, salary account, $175; bills, $10.50; traveling expenses, $128.71 | 314 21 |
| | | F. O. Howard, clerk, 6th district, salary, September, $83.33; bills, 75 cents; traveling expenses, $34.56 | 118 64 |
| | | Cyrus Strong, Jr., rent, office, 6th district | 25 00 |
| | | Albany News Co., office supplies | 9 40 |
| | | John F. Humphrey, janitor, 6th district, September | 10 00 |
| | | B. S. Curran, Jr., 6th dist., salary, Sept., $75; expenses, $2.45 | 77 45 |
| | | W. H. Williams, messenger, 7th district, thirteen weeks | 52 00 |
| | | William Green, clerk, 1st district, September 24 to October 15 | 28 33 |
| | | Geo. Tomes, clerk, 1st district, October 1–15 | 70 84 |
| | | W. F. Stetler, stenographer, 1st district, October 1–15 | 56 66 |
| | | E. C. Stanton, clerk, 1st district, September 1 to October 15 | 312 50 |
| | | Geo. Neidhardt, 1st district office, September 24 to October 15 | 8 50 |
| | | Union & Advertiser Co., printing bill | 12 25 |
| | | Footing to November, 1892 | $83,403 73 |
| Nov. | 1. | P. T. Wall, clerk, salary, September 1–10 and October 8–31 | 221 47 |
| | | John H. Larkin, clerk, salary, $75; expenses, $11.15 | 86 15 |
| | 2. | John Foord, secretary, salary, October, $250; traveling expenses, $97.10; bills paid, $6.95 | 354 05 |
| | | W. L. Sessions, general manager, auditor, traveling expenses | 42 25 |
| | | Anna I. Jennyss, stenographer, salary, October | 50 00 |
| | | T. W. Loftus, superintendent State Building, salary, October | 90 00 |
| | | Minnie A Parks, stenographer, salary, October | 52 00 |
| | | Anna M. Parks, stenographer, October salary | 50 00 |



NEW YORK TRADE SCHOOL

| | | | |
|---|---|---|---|
| Nov. | 2. | I. V. Burch, October salary | $58 00 |
| | | G. S. Stevens, clerk, 3d district, salary account, $120; traveling expenses, $34.41; postage paid, $85.15 | 239 56 |
| | | John Phillips, clerk, 2d district, salary account | 125 00 |
| | | T. F. Farrell, clerk, 2d district, salary account | 200 00 |
| | | D. & M. Chauncey, rent, office, 2d district, October | 66 67 |
| | | Gavit & Co., stationery, 3d district | 32 75 |
| | | Florence C. Ives, chief officer, Women's Board, October salary, $166.66; traveling expenses, $86.09; bills, $1.15 | 253 90 |
| | | John T. Norton, commissioner, traveling expenses, 3d district | 46 90 |
| | 3. | L. M. Howland, August and September bills and expenses | 400 00 |
| | 7. | Margaret Tomes, Women's Board, salaries, $115.83; traveling expenses, $46.80; bills, $9.35; furniture, $7.06 | 179 04 |
| | | Adams & Hodgman, livery account, 4th district | 26 00 |
| | | American Express Co., September, Women's Board | 2 10 |
| | | T. J. Whitney, commissioner, 4th district, traveling expenses | 68 65 |
| | | John M. Fake, clerk, 4th district, October salary | 52 00 |
| | | S. E. Van Buren, stenographer, 4th district, October salary | 6 00 |
| | | Mrs. W. J. Averell, traveling expenses, Women's Board | 91 66 |
| | | Miss M. M Love, traveling expenses, Women's Board | 28 67 |
| | | P. J. Cuskley, rent, office, October | 83 33 |
| | | F. J. H. Merrill, traveling expenses, Scientific exhibit | 36 90 |
| | | H. J. Rogers, Education, salary, Oct. 15 to Nov. 1, $87.50; traveling expenses, $15.05 | 102 55 |
| | 10. | E. P. Bailey & Co , advertising, 5th district | 19 38 |
| | | L. C. Ackler, clerk, Dairy department, to November 1 | 25 00 |
| | | Josiah Shull, commissioner, Dairy, expenses and bills | 49 75 |
| | | H. V. Cronin, stenographer, 7th district, October salary | 50 00 |
| | | W. H. Benjamin, clerk, 7th district, October salary | 100 00 |
| | | Mrs. Leslie Pell-Clarke, traveling expenses, Women's Board | 126 73 |
| | | Mrs. F. P. Bellamy, traveling expenses, bills, Women's Board | 19 39 |
| | | Miss. Anna Roosevelt, expenses and bills, Women's Board | 103 00 |
| | | W. B. Kirk, office rent, 5th district, October | 30 00 |
| | | H. S. Estcourt, clerk, 4th district, salary, October, $100; traveling expenses, $59.89 | 159 89 |
| | 11. | L. M. Howland, August and September expenses | 200 00 |
| | 14. | R. Fleming, office boy, salary, October | 13 00 |
| | | P. T. Wall, traveling expenses, etc | 58 85 |
| | | P. J. Cuskley, rent, 1st district, July, September and October | 600 00 |
| | | Jno. R. Moynihan, clerk, salary, Oct. $67.74; expenses, $65.51 | 133 25 |
| | | Hudson River Telephone Co., bill, October | 13 54 |
| | | E. L. Hanes, stenographer, seventeen days, Scientific | 34 00 |
| | | Heinrich Ries, traveling expenses, Scientific | 97 76 |
| | | Mrs. George Waddington, traveling expenses, Women's Board | 48 75 |
| | | D. A. Van Ingen, traveling expenses, Scientific exhibit | 53 40 |
| | | Frances T. Patterson, traveling expenses, Women's Board | 31 14 |
| | | Mrs. Erastus Corning, traveling expenses, Women's Board | 35 00 |
| | | H. J. Rogers, Education, salary, $96; bills, $55.90 | 151 90 |
| | | F. L. Underhill, clerk, Agricultural bureau, salary, October | 125 00 |
| | | John W. Sanborn, supt., Ethnology, salary, October, $125; bills, $13.99 | 138 99 |
| | | R. B. Hough, superintendent, Forestry, traveling expenses | 117 65 |
| | | J. F. Hawkins, 6th dist., salary, October, $100; expenses, $13.40 | 113 40 |
| | | Cyrus Strong, rent, 6th district office, October | 25 00 |
| | 15. | Lena P. Bennett, clerk, 5th dist., salary, October | 83 33 |
| | 16 | L. M. Howland, general manager, expenses, October | 222 32 |
| | | G. S. Stevens, bills paid, General and Women's Board, Indian, Charities exhibit, vouchers | 67 45 |
| | | T. W. Loftus, superintendent, State Building, July salary | 62 00 |
| | 21. | American Express Co., account, September and October | 18 04 |
| | | Postal Telegraph Cable Co., account, September and October | 53 19 |
| | | Western Union Telegraph Co., bill, September and October | 109 90 |
| | | Metropolitan Storage and Transportation Co., October bill, Agricultural bureau | 50 00 |
| | | W. F. Stetler, stenographer, 1st district, salary, to November 15 | 90 00 |

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| Nov. | 21. | Wm. Green, clerk, 1st district, salary, to November 15 | $45 00 |
| | | E. C. Stanton, clerk, 1st district, salary, to November 15 | 208 33 |
| | | M. B. Mattice, commissioner, treasurer 3d district, expenses. | 28 30 |
| | | The Argus Co., printing account, Women's and General Boards, September 2 to October 26 | 362 11 |
| | | B. Quinn, mailing tubes | 14 50 |
| | | F. Schilling, stone cutting, etc., Scientific exhibit | 111 97 |
| | | R. B. Hough, superintendent, Forestry, traveling expenses | 241 53 |
| | | D. A. Van Ingen, traveling expenses, Scientific exhibit | 44 99 |
| | 22. | S. I. Ford, Johnson & Co., chairs, dedication State Building. | 121 00 |
| | | John Boyd Thacher, traveling expenses | 50 70 |
| | | McKim, Mead & White, architects' commission, State Building. | 1,041 25 |
| | | Donald McNaughton, chief executive officer, salary, October, $416.67; bills for General, Women's and Ethnology Boards. | 920 12 |
| | 28. | National Express Co., bill, October | 7 28 |
| | | R. Delafield, commissioner, 1st district, traveling expenses | 165 60 |
| | | S. G. Spier, typewriter supplies, General and Women's Boards. | 42 10 |
| | | Mrs. J. S. T. Stranahan, traveling expenses | 108 15 |
| | | Donald McNaughton, seven bills paid, General, Women's and Ethnology exhibits | 134 20 |
| | | Miss Annie Hemstrought, expenses, Women's Board | 47 50 |
| | | A. L. Hough, photographer's bill, Forestry exhibit | 225 00 |
| | | Fraser & Kelly, carting, Scientific exhibit | 16 52 |
| | | A. A. Wing, statistical table work, Charities exhibit | 63 00 |
| | | W. H. Williams, messenger, 7th district, October | 17 33 |
| | | D. A. Van Ingen, salary, $52; expenses, $45.13; Scientific | 97 13 |
| | | Mrs. C. F. Wadsworth, traveling expenses, Women's Board. | 72 03 |
| | | Rochester Awning and Tent Co., flags, State Building | 21 00 |
| | | John Foord, secretary, printing, dedication State Building | 55 56 |
| | | C. L. Hinton, posing, etc., statue of Hudson | 24 00 |
| | | Mrs. E. G. Halsey, traveling expenses, Women's Board | 30 10 |
| | | Mrs. C. Wheeler, traveling expenses, Women's Board | 114 20 |
| | | Mrs. F. P. Bellamy, traveling expenses, Women's Board | 17 70 |
| | | Miss J. I. Howard, traveling expenses, Women's Board | 67 50 |
| | | Consolidated Transfer Co., carriages, Women's Board | 8 00 |
| | | Ira H. Woolson, labor, Scientific exhibit | 21 00 |
| | | Metropolitan Telegraph and Telephone Co., October account. | 27 35 |
| | | Miss C. E. Dennis, traveling expenses. Women's Board | 53 43 |
| | | Footing to December, 1892 | $94,620 71 |
| Dec. | 2. | L. M. Howland, general manager, expenses, General Board | 271 88 |
| | 8. | John Foord, secretary, salary, November | 250 00 |
| | 9. | F. H. Vick, account, superintendent, Floriculture, salary, $100; traveling expenses, $140.63 | 240 63 |
| | | Florence C. Ives, Women's Board, salary, November, $166.66; expenses, $20.95 | 187 61 |
| | | I. V. Burch, stenographer, salary account | 52 00 |
| | | Mrs. Leslie Pell-Clarke, traveling expenses, Women's Board. | 44 73 |
| | | T. W. Loftus, salary, August and September | 180 00 |
| | | H. O'Neill & Co., furniture, Women's department | 18 00 |
| | | Metropolitan Telephone and Telegraph Co., bill of August and September, 1st district | 48 50 |
| | | E. C. Stanton, rent, November, of 1st district office | 200 00 |
| | | P. J. Cuskley, agent, rent, November, Women's Board | 83 33 |
| | | Blakley & Rogers, printing, Charities exhibit | 29 50 |
| | | B. W. Wooster & Co., furniture, General Board | 31 00 |
| | | Ford, Johnson & Co, furniture, State Building | 7 75 |
| | | Keuffel & Esser, drawing material, charities exhibit | 42 10 |
| | | John H Larkin, clerk, salary, November | 75 00 |
| | | P T. Wall, clerk, salary, November | 200 00 |
| | | Donald McNaughton, chief executive officer, salary, $416.66; and seven bills, General and Women's Boards, $907.21 | 1,323 87 |
| | | R. Fleming, office boy, salary November | 13 00 |
| | | G. T Smith, clerk, 8th district, October salary | 100 00 |
| | | W. E. Smith, assistant clerk, 8th district, June, July, August and September salary | 200 00 |

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| Dec. | 9. | H. J. Rogers, Education, salary account, $315; expenses, $75.45. | $390 45 |
| | | T. F. Farrell, clerk, 2d district, salary, November | 200 00 |
| | | John Phillips, clerk, 2d district, salary, November | 125 00 |
| | | D. & M. Chauncey Co., rent, 2d district office, November | 66 67 |
| | | E. L. Hanes, stenographer, Scientific exhibit | 50 00 |
| | | John M. Fake, clerk, 4th district, salary, November | 54 00 |
| | | S. E. Van Buren, stenographer, 4th district, salary, November. | 20 00 |
| | | H. S. Estcourt, clerk, 4th district, salary, November, $100; bills, $7.25 | 107 25 |
| | | Mary E. Sculley, stenographer, to November 30, Charities exhibit | 72 00 |
| | | L. P. Bennett, 5th district, November salary, $100; bills, $19.39. | 19 39 |
| | | John Humphrey, janitor, 6th district, one month | 10 00 |
| | | G. S. Stevens, 3d district, salary $120; bills, $24.63 | 144 63 |
| | | New York Central and Hudson River Railroad Co., transportation account, escort, Troop A | ,646 00 |
| | | Wagner Palace Car Co., transportation and subsistence account, Troop A | 420 00 |
| | | W. H. Underwood, transportation and subsistence account, M. C. R. R. Co., Troop A | 155 00 |
| | | Capt. C. F. Roe (Troop A); horses, etc., $1,384.75; Western Union Telegraph Co. account, $16.10, cartage account, $21.25. | 1,422 10 |
| | | J. T. Nevin, forage account, Troop A | 217 20 |
| | | Acker, Merrill & Condit, stores, etc., Troop A | 372 94 |
| | | A. E. Braithwaite, music, Troop A | 72 00 |
| | | W. S. Johnson & Bro., meals en route, Troop A | 180 00 |
| | | G. Hurry, supplies, Troop A | 47 00 |
| | | American Express Co., transportation, horses, Troop A | 2,500 00 |
| | 14. | Anna I. Jennyss, stenographer, Women's Board, November. | 50 00 |
| | | Hudson River Telephone Co., bill for November | 16 44 |
| | | National Express Co., bill for November | 3 45 |
| | | W. C. Clarke, services, $22; expenses, $27.39; Scientific | 49 39 |
| | | Henry Koons, commissioner, 8th district, traveling expenses. | 57 50 |
| | | Geo. T. Smith, clerk, 8th district, traveling expenses | 58 50 |
| | | W. T. Ransom, commissioner, 8th district, expenses | 78 71 |
| | | W. G. Eberhardt, services, $24; expenses, $44.37, Scientific. | 68 37 |
| | | Margaret Tomes, Women's Board, salary account, $139.33; traveling expenses, $20.80; bills paid, $67.17 | 227 30 |
| | | H. Romeike, press records | 8 25 |
| | | J. F. Hawkins, clerk, 6th district, salary, $100; bills, $5 | 105 00 |
| | | A. M. Collins Manufacturing Co., cardboard, Scientific | 11 70 |
| | | F. J. H. Merrill, office expenses, Scientific exhibit | 13 44 |
| | | University State of New York, clerical work, Women's Board. | 101 00 |
| | | J. W. Sanborn, Ethnology, salary, Nov., $125; expenses $17.24. | 142 24 |
| | | Annie Campbell, labor statistics, Women's Board | 33 33 |
| | | R. D. White, services, $42; expenses, $87.72; Scientific | 129 72 |
| | | Annie G. Wall, labor statistics, Women's Board | 53 33 |
| | | C. Strong, Jr., rent, office, 6th district, November | 25 00 |
| | | Richardson & Foos, printing, Chicago dedication | 24 00 |
| | | Wallbridge & Co., office furniture, 8th district | 13 40 |
| | | H. W. Box, commissioner, 8th district, traveling expenses | 65 25 |
| | | H. Ries, services, $81; expenses, $164.42; bills, $8.09; Scientific. | 253 51 |
| | | S. M. Savage, services, $26; traveling account, $63; bills paid, 50 cents; Scientific exhibit | 89 59 |
| | | Anna M. Parks, stenographer, salary account | 50 00 |
| | | T. W. Loftus, superintendent, State Building, salary account. | 90 00 |
| | 16. | John Foord, secretary, traveling expenses | 24 60 |
| | | Central Union Transfer Co., storage, Horticultural exhibit | 18 90 |
| | | O. L. Hershiser, expenses, $56.40; bills, $13.25; Apiarian | 69 65 |
| | | Citizens' Publishing Co., printing, Dairy exhibit | 22 50 |
| | | M. T. Morgan, services, $60; expenses, $73.73; bills, $1.39; Dairy | 135 12 |
| | | Josiah Shull, traveling expenses, $21.58; bills paid, $18.29. | 39 87 |
| | | F. L. Underhill, clerk, Agriculture, salary, November | 125 00 |
| | | James Wood, superintendent, Agriculture, traveling expenses, $161.48; bills paid, $29.67 | 191 15 |

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| Dec. | 16. | Frances T. Patterson, expenses, etc., Women's Board. ..... | $37 55 |
| | | Mrs. C. F. Wadsworth, expenses, etc., Women's Board..... | 34 90 |
| | | Rapid Addressing Machine Co., Chicago dedication invitations. | 32 50 |
| | | J. I. Howard, traveling and other bills paid, Women's Board. | 74 58 |
| | | Chas. L. Hinton, services and expenses, Statuary..... | 90 31 |
| | | W. B. Kirk, rent, 5th district office, November..... | 30 00 |
| | | National Express Co., bill, Scientific exhibit..... | 23 55 |
| | | T. F. Romeyn, boxes, Scientific exhibit ..... | 43 75 |
| | | L. P. Bennett, 5th district, salary, $100; Nov. bills, $4.16 ... | 104 16 |
| | | George T. Powell, Horticultural department, salary account, $50; traveling, $24.56; bills paid, $14.40 ..... | 88 96 |
| | | F. O. Howard, 6th district, salary, Nov. $83.33; bills, $1.50.. | 84 83 |
| | | B. S. Curran, clerk, 6th district, salary, October and November, $150; bills paid, $28.25..... | 178 25 |
| | | W. H. Gilbert, Dairy, traveling, $118.31; bills, $35.15..... | 153 46 |
| | | Postal Telegraph Cable Co., bill, November..... | 15 68 |
| | | D. A. Van Ingen, services, $24; traveling, $77.49; bills paid, $1.20; Scientific exhibit..... | 102 69 |
| | | W. B. Dwight, services, $54; traveling, $9.51; bills paid, $47.94; Scientific exhibit..... | 111 45 |
| | | Wm. Green, clerk, 1st district, salary, November 16–30..... | 21 66 |
| | | Amberg File & Index Co., 1st district, furniture, office..... | 50 00 |
| | | W. F. Stetler, stenographer, 1st district, November 16–30... | 43 33 |
| | | E. C. Stanton, office expenses ..... | 6 00 |
| | | W. L. Sessions, general manager, traveling expenses..... | 27 17 |
| | | Samuel Martin, locks, etc., 1st district office..... | 8 00 |
| | | L. B. Tupper, janitor, 1st dist., five mos., $100; expenses, $5.60. | 105 60 |
| | | John Humphrey, janitor, 6th district..... | 10 00 |
| | | Yates & Durturf, photographs, 5th district..... | 16 00 |
| | | Bell Telephone Co., 8th district, six months' contract..... | 35 25 |
| | 20. | Auditorium Hotel Co., Chicago, dedication, October, 1892... | 1,217 20 |
| | | Milligan & Co., Hyde Park Hotel Co., Chicago dedication, October, 1892..... | 618 40 |
| | | Rand & McNally, printing, Chicago dedication, October, 1892. | 133 10 |
| | | D. McCarthy & Co., furniture account, 5th district... ..... | 226 86 |
| | | Barnes, Hengerer & Co., furniture account, 8th district..... | 66 08 |
| | | C. F. Dall, furniture account, 8th district..... | 79 50 |
| | | P. J. Donley, furniture account, 6th district..... | 51 00 |
| | | McElroy & Fancher, furniture account, 6th district..... | 138 00 |
| | | Ward's Natural Science Establishment, payment on State Relief Map..... | 2,000 00 |
| | | W. H. Underwood, agent Michigan Central railroad, special train, October, to and from Chicago..... | 2,668 65 |
| | 23. | Harden Hand Grenade Co., for New York State Building.... | 54 00 |
| | | Alfred Wilcox, flagstaff account, New York State Building.. | 30 00 |
| | | James Butler, messenger, account..... | 24 00 |
| | | Wm. Green, clerk, 1st district, salary to December 15..... | 21 66 |
| | | W. F. Stetler, stenographer, 1st district, salary to December 15. | 43 33 |
| | | E. C. Stanton, clerk, salary to December 15..... | 208 33 |
| | | H. V. Cronin, stenographer, 7th district, salary, November.. | 50 00 |
| | | W. H. Benjamin, clerk, 7th district, salary, November..... | 100 00 |
| | | G. T. Smith, clerk, 8th district, salary, November ..... | 100 00 |
| | | Martha D. Bessey, design seal, Women's Board..... | 20 00 |
| | | H. J. Rogers, Education, salary account, $57.50; bills paid, $148.21; traveling, $158.64..... | 364 35 |
| | | E. G. Fowler, Horticulture, salary, $166.66; traveling, $27.05. | 193 71 |
| | 30. | F. H. Vick, Floriculture, $80; bills, $4.25; traveling, $91.56. | 175 81 |
| | | S. D. Willard, Horticulture, salary account, $285.75; bills, $32.31; stock for exhibit, $224.70; expenses, $135.13..... | 677 89 |
| | | E. C. Stanton, 1st district, office expenses, $35 96; Metropolitan Telegraph and Telephone Co., $36.90..... | 72 86 |
| | | Geo. T. Powell, Horticulture, bills, $47.75; supplies, $36.75.. | 84 50 |
| | | Hotel Iroquois, Buffalo, account Chicago trip, October, 1892.. | 104 45 |
| | | Henry Stowell, commissioner, 7th district, traveling expenses. | 83 84 |
| | | H. Bowen, Agriculture, salary, $235; expenses, $118.62; bills $3.04; supplies for exhibit, $22.75..... | 378 41 |

PENNSYLVANIA

NEW YORK

MAIN AVENUE FOR

MASSACHUSETTS

STATE BUILDINGS

| | | | |
|---|---|---|---|
| Dec. | 30. | D. A. Van Ingen, labor, $14; expenses, $33.63; bills, 75 cents. | $48 38 |
| | | Moore, Campbell & Kellner, rent, 8th district, for October and November | 80 00 |
| | | P. J. Cuskley, agent, rent, Women's Board, for December | 83 33 |
| | | W. L. Sessions, general manager, traveling expenses | 28 99 |
| | | Scrantom, Wetmore & Co., stationery, Women's Board | 10 90 |
| | | Fraser & Kelly, carting, Scientific exhibit | 27 44 |
| | | Henry Siebert, 2d district, office expenses, June 21 to Nov | 60 85 |
| | 31. | John Foord, salary, December, $250; expenses, $29.50 | 279 50 |
| | | John H. Reynolds, salary account | 190 00 |
| | | Footing to January 1, 1893 | $121,382 40 |
| 1893. | | | |
| Jan. | 5. | Geo. A. Fuller Co., payment on State Building | 10,000 00 |
| | | John H. Larkin, clerk, salary, December | 75 00 |
| | | P. T. Wall, clerk, salary | 200 00 |
| | | Anna I. Jennyss, stenographer, salary account | 50 00 |
| | | Donald McNaughton, chief executive officer, salary, December | 416 67 |
| | | Annie S. Wall, salary, statistics, December, Women's Board. | 100 00 |
| | | Annie Campbell, salary, statistics, December, Women's Board. | 100 00 |
| | | H. Ries, services, $51; expenses, $75.72; bills, $4.70 | 131 42 |
| | | Florence C. Ives, chief officer, Women's Board, salary, December, $166.66; traveling expenses, $7.70; bills, $11.68 | 186 04 |
| | | New York and New Jersey Telephone Co., 2d district, bill, 3 months | 38 50 |
| | | D & M. Chauncey Co., rent, 2d district, December | 66 67 |
| | | T. F. Farrell, clerk, salary, 2d district, December | 200 00 |
| | | John Phillips, clerk, salary, 2d district, December | 125 00 |
| | | Geo. T. Powell, Horticulture, bills, $14.80; supplies $221.89. | 236 69 |
| | | G. C. Snow, Viticulture, traveling, $71.85; supplies, $30; bills paid, $12.47 | 114 32 |
| | | W. T. Comstock, printing pictures, State Building | 10 00 |
| | | E. L. Hanes, stenographer, December, Scientific | 50 00 |
| | | D. M. Somers, commissioner, 2d district, traveling expenses. | 13 25 |
| | | A. S. Cotton, photos | 10 00 |
| | | Wagner Palace Car Co., account, Chicago trip, October, 1892. | 22 00 |
| | | H. J. Rogers, Education, salaries, October, $390; bills, $5.50. | 395 50 |
| | | P. J. Cuskley, agent, rent, 1st district, office, December | 200 00 |
| | | Wm. Green, clerk, 1st district, salary, December 16–31 | 23 33 |
| | | W. F. Stetler, stenographer, 1st dist., salary December 16–31 | 46 67 |
| | | Miss C. E. Dennis, traveling expenses, $64.42; bills, $3.15 | 67 57 |
| | 6. | G. S. Stevens, clerk, 3d district, salary, $120; bills, $83.74 | 203 74 |
| | | Ida V. Burch, stenographer, salary, December | 54 00 |
| | | Anna M. Parks, stenographer, salary, December | 50 00 |
| | | Hudson River Telephone Co., bill, December | 10 74 |
| | 10. | Geo. T. Smith, clerk, 8th district, salary, December | 100 00 |
| | 11. | Tiffany & Co., printing, Chicago dedication, October, 1892 | 380 00 |
| | | World's Columbian Exposition, music, Chicago dedication, October, 1892 | 450 00 |
| | | Hotel Brunswick, Women's Board, New York, October 11–13. | 563 65 |
| | | Women's Baking Co., Chicago, 1,500 lunches, Chicago dedication, October, 1892 | 1,500 00 |
| | 19. | F. J. H. Merrill, bills paid, Scientific exhibit | 40 84 |
| | | W. G. Eberhardt, services, $44; expenses, $61.49; Scientific. | 105 49 |
| | | Arthur Hollick, services, $15; expenses, $21.26; Scientific | 36 26 |
| | | W. C. Clarke, services, $52; expenses, $81.46; bills, $1.74; Scientific | 135 20 |
| | | Fraser & Kelly, carting, Scientific | 35 46 |
| | | Moore, Campbell & Kellner, rent, 8th district, December | 40 00 |
| | | Geo. T. Smith, clerk, office expenses, 8th district, December. | 6 34 |
| | | G. T. Powell, Horticulture, salary, $108.33; expenses, $69.35; bills, $5.36 | 183 04 |
| | | J. W. Sanborn, Ethnology, salary, $125; traveling, $6.85; bills, $19.15 | 151 00 |

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| Jan. | 19. | C. G. Braxmar, badges | $24 50 |
| | | Albany News Co., office supplies | 10 32 |
| | | Auditorium Hotel Co., Chicago dedication, October, 1892 | 153 45 |
| | | S. B. Van Ness, salary, October 15 to November 15 | 75 00 |
| | | W. L. Sessions, general manager, traveling expenses | 27 21 |
| | | Scrantom, Wetmore & Co., stationery to November 17 | 228 98 |
| | | John R. Moynihan, clerk, salary, Nov., $100; expenses, $56.79. | 156 79 |
| | | Postal Telegraph Cable Co., bill, December | 8 91 |
| | | Union and Advertiser Co., printing | 16 00 |
| | | G. P. Putnam's Sons, book register | 8 50 |
| | | James Field Co., flags, State Building | 175 02 |
| | | S. D. Backus, services, map work, Charities exhibit | 233 00 |
| | | A. P. Wilbur, services, map and chart, Charities exhibit | 51 81 |
| | | G. L. Fanning, clerk, chart, Charities exhibit | 20 00 |
| | | B. S. Curran, clerk, 6th district, salary, December, $75; bills, $10.25 | 85 25 |
| | | F. O. Howard, clerk, 6th district, salary, December | 83 33 |
| | | J. F. Hawkins, clerk, 6th district, salary, December | 100 00 |
| | | J. F. Humphrey, janitor, 6th district, salary, December | 10 00 |
| | | Binghamton Electric Co., 6th district, lighting | 18 00 |
| | | Cyrus Strong, Jr., rent, 6th district, December | 25 00 |
| | | W. H. Benjamin, chief clerk, 7th district, salary, December | 100 00 |
| | | H. V. Cronin, stenographer, 7th district, salary, December | 50 00 |
| | | W. H. Williams, messenger, 7th district, salary, December | 17 33 |
| | | F. P. Hazleton, supplies, Apiarian exhibit | 12 40 |
| | | Hiram H. Davis, supplies, Apiarian exhibit | 23 95 |
| | | F. C. Hutchins, supplies, Apiarian exhibit | 56 92 |
| | | W. N. Miller, supplies, Apiarian exhibit | 145 65 |
| | | F. H. Fargo, supplies, Apiarian exhibit | 792 55 |
| | | Metropolitan Storage and Transfer Co., Agricultural bureau. | 134 76 |
| | | Hez. Bowen, expenses, $248.99; bills, $4.86; furniture, $20. | 273 85 |
| | | Peter Collier, Agriculture, supplies, Experiment Station | 326 63 |
| | | F. L. Underhill, clerk, Agriculture, salary | 125 00 |
| | | A. J. Parker (Weed, Parsons & Co.), printing, Women's Board | 124 96 |
| | | The Knickerbocker Press, printing, Women's Board | 23 85 |
| | | Margaret Tomes, Women's Board, salary, $145.33; bills, $66.55 | 211 88 |
| | | L. C. Ackler, stenographer, two months, Dairy | 150 00 |
| | | H. A. Ries, services, $8; traveling, $2 | 10 00 |
| | | Josiah Shull, traveling and other expenses | 11 91 |
| | | A. B. Davis, traveling expenses, $6 (Dairy); services, $9 | 15 00 |
| | | A. S. Kinney, expenses, $21.99 (Dairy); services, $25 | 46 99 |
| | | W. W. Hall, expenses, $12.95 (Dairy); services, $25.50 | 38 45 |
| | 24. | W. L. Sessions, traveling expenses | 20 10 |
| | | John R. Moynihan, clerk, salary, Dec., $100; expenses, $18.53. | 118 53 |
| | | A. J. Parker, receiver, Weed, Parsons & Co., printing | 27 62 |
| | | John Foord, secretary, traveling expenses | 51 00 |
| | | T. W. Loftus, salary, December, $90; expenses, $25.50 | 115 50 |
| | | J. B. Campbell, book account, 4th district | 4 25 |
| | | S. E. Van Buren, stenographer, 4th district, salary, December. | 35 00 |
| | | H. S. Estcourt, clerk, 4th district, salary, $100; bills, $10.92. | 110 92 |
| | | John M. Fake, clerk, 4th district, salary, December | 54 00 |
| | | F. J. H. Merrill, supplies, Scientific | 18 00 |
| | | Niagara Marble Works, supplies, Scientific | 23 00 |
| | | Reed & Co., cartage, etc., Scientific | 8 16 |
| | | W. H. Benjamin, office expenses, 7th district | 9 41 |
| | | W. H. Williams, messenger, December, 7th district | 18 00 |
| | | F. A. Phillips, stock, Apiarian exhibit | 14 95 |
| | | Henry J. Rogers, stock, Apiarian exhibit | 8 60 |
| | | Footing to February, 1893 | $143,146 98 |
| Feb. | 3. | Anna I. Jennyss, stenographer, salary, January, Women's Board | 50 00 |
| | | Florence C. Ives, chief officer, Women's Board, salary, $166.68; expenses, $19.35; bills, $11.48 | 197 51 |

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| Feb. | 3. | Lydia F. Emmett, designing seal, Women's Board | | $75 00 |
| | | F. H. Vick, Floriculture, salary, $100; traveling expenses, $152.39 | | 252 39 |
| | | H. J. Rogers, Education, traveling expenses, $106.79; bills, $141.41; supplies, $440.41; salary account, $385 | | 1,073 61 |
| | | Donald McNaughton, fifteen bills paid, six department exhibits, $210.71; services, $33; bills, $77.50; stock for exhibit, $33.03 | $354 33 | |
| | | Donald McNaughton, seven bills paid (General, Forestry and Ethnology), traveling, $40; services, $13; bills, $3.55; supplies, $104.86 | 161 41 | |
| | | | | 515 74 |
| | | W. L. Sessions, general manager, traveling expenses | | 27 40 |
| | | P. T. Wall, clerk, salary account | | 200 00 |
| | | John H. Reynolds, salary account, $150; expenses, $5.32 | | 155 32 |
| | | Anna M. Parks, stenographer, salary account | | 50 00 |
| | | John Foord, secretary, salary account | | 250 00 |
| | | T. F. Farrell, clerk, 2d district, salary, January | | 200 00 |
| | | John Phillips, clerk, 2d district, salary, January | | 125 00 |
| | | E. L. Hanes, stenographer, 2d district, salary, January | | 55 00 |
| | | W. H. Gilbert, traveling expenses, Dairy exhibit | | 76 12 |
| | | D. & M. Chauncey Co., rent, 2d district, January | | 66 67 |
| | 7. | G. S. Stevens, clerk, 3d district, salary, $120; bills, $20.75 | | 140 75 |
| | | Donald McNaughton, seven bills in four departments, $432; salary, January, $416.67 | | 848 67 |
| | | Ida V. Burch, stenographer, salary account | | 52 00 |
| | | A. L. Hough, photographing Forestry exhibit | | 142 50 |
| | | F. J. H. Merrill, expenses, $57.08; bills, $43.54; Scientific | | 100 62 |
| | | Geo. T. Powell, expenses, $31.11; salaries, $150; bills, $59.04; Horticulture | | 240 15 |
| | | John W. Sanborn, expenses, $35.56; salaries, $125; bills, $2.85; Ethnology | | 163 41 |
| | | Lena P. Bennett, two months' salary, $200; bills, $15.90; 5th district | | 215 90 |
| | | W. F. Stetler, stenographer, salary, January, 1st district | | 86 67 |
| | | Wm. Green, clerk, salary, January, 1st district | | 43 34 |
| | | Edm. C. Stanton, clerk, salary, to January 31, 1st district | | 312 49 |
| | | P. J. Cuskley, agent, January rent, Women's Board, $83.33; and 1st district, $200 | | 283 33 |
| | | Miss Anna Hemstrought, traveling expenses, Women's Board | | 21 25 |
| | | Mrs. H. A. St. John, traveling expenses, Women's Board | | 16 51 |
| | | Mrs. W. J. Averell, traveling expenses, etc., $26.84; bills, $10.38; Women's Board | | 37 22 |
| | | Miss C. E. Dennis, expenses, $33.74; bills, $19.65; Women's Board | | 53 39 |
| | | Margaret Tomes, traveling expenses, $17.65; salaries, $135.33; bills paid, $28.80; Women's Board | | 181 78 |
| | | Mrs. J. S. T. Stranahan, expenses, $34.30; bills, $37.99; Women's Board | | 72 29 |
| | | Mrs. F. P. Bellamy, traveling expenses, $110.40; salaries, $74.20; bills paid, $14.26; Women's Board | | 198 86 |
| | | Mrs. O. S. Straus, traveling expenses | | 11 00 |
| | 8. | Library bureau, office equipment, Scientific exhibit | | 9 00 |
| | | Fairbanks & Co., scales | | 9 00 |
| | | W. G. Eberhardt, traveling, $16.66; salary $18 | | 34 66 |
| | | Ward's Natural Science Establishment, shells, Scientific | | 4 40 |
| | | F. Schilling, stonecutting and polishing, Scientific exhibit | | 904 75 |
| | | H. Ries, traveling, $113.46; salary, $75; bills, $6.45; Scientific | | 194 91 |
| | | The Argus Co., printing, Women's Board | | 201 45 |
| | | The Knickerbocker Press, postage | | 10 00 |
| | | Annie Campbell, salary account, January, Statistics | | 100 00 |
| | | Annie S. Wall, salary account, January, Statistics | | 100 00 |
| | | Pussey & Troxell, stationery, 1st district | | 35 43 |
| | | E. C. Stanton, office expenses, 1st district | | 56 94 |
| | | L. B. Tupper, janitor, 1st district | | 20 00 |
| | | Metropolitan Telegraph and Telephone Co., 1st district | | 26 85 |

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| Feb. | 8. | F. H. Vick, salary, Jan., $100; expenses, $11.21; Floriculture | $111 21 |
| | | Josiah Shull, traveling expenses, $12, and bill, $3.78; Dairy | 15 78 |
| | | L. C. Ackler, clerk, salary, January, Dairy | 50 00 |
| | | O. L. Hershiser, expenses, $82.92; bills, $8.74; Apiarian | 91 66 |
| | | C. V. Lindsay, stock, Apiarian | 208 11 |
| | | P. H. Elwood, Apiarian | 40 80 |
| | | Noel Hawkins, stock, Apiarian | 15 90 |
| | | Albany Hardware & Iron Co., supplies, Transportation | 13 25 |
| | | B. R. Spelman, rent, Transportation | 50 00 |
| | | J. D. McClasky, cartage, Transportation | 2 00 |
| | | S. D. Willard, stock, Horticulture | 9 00 |
| | | O. L. Warner, traveling expenses | 65 75 |
| | | Rogers & Ruso, typewriter supplies | 27 40 |
| | | James McDonough, books | 50 00 |
| | | Photo. Chrome Engraving Co., souvenir bookwork | 250 00 |
| | | Hudson River Telephone Co., bill, January | 19 64 |
| | | American Express Co., bill, January | 13 47 |
| | | Postal Telegraph Cable Co | 16 23 |
| | | John Phillips, clerk, traveling expenses, 2d district | 9 25 |
| | | G. T. Smith, clerk, 8th district, postage | 5 00 |
| | | Wm. E. Smith, two months' salary, 8th district | 100 00 |
| | | Hugh Duffy, commissioner, 6th district, traveling expenses | 18 58 |
| | | F. O. Howard, clerk, 6th district, salary, January | 83 33 |
| | | Cyrus Strong, rent, 6th district, January | 25 00 |
| | | J. F. Humphrey, janitor, 6th district, salary, January | 10 00 |
| | | J. F. Hawkins, chief clerk, 6th district, salary, January | 100 00 |
| | | S. E. Van Buren, stenographer, 4th district, salary, January | 50 00 |
| | | H S. Estcourt, clerk, 4th district, salary, $100; bills, $13.50 | 113 50 |
| | | J. M. Fake, clerk, 4th district | 52 00 |
| | | Adams & Hodgman, livery account, 4th district | 21 00 |
| | | Bernard Brunner, supplies, 4th district | 1 85 |
| | | Utica Herald Publishing Co., advertising, 5th district | 22 75 |
| | | A. R. Wilson, photographs | 12 25 |
| | | W. B. Kirk, rent, two months, 5th district | 60 00 |
| | | W. H. Bright, photographs, 5th district | 13 00 |
| | | Moser & Lyon Co., office supplies, 5th district | 2 75 |
| | | W. G. Mandeville, Jr., negative, 5th district | 1 00 |
| | | T. S. Hewkes, negative, 5th district | 2 50 |
| | | F. S. Richards, negative, 5th district | 7 00 |
| | 10 | L. M. Howland, general manager, traveling expenses, etc., $328.14; bills paid, $78.96; furniture, $8 | 408 10 |
| | 11. | L. E. Van Kirk, executrix, estate of C. C. Van Kirk, traveling, etc., $76.44; salary, $200; bills, $72.20 | 348 64 |
| | | W. H. Benjamin, clerk, 7th district, salary, January | 100 00 |
| | | H. V. Cronin, stenographer, 7th district, salary, January | 50 00 |
| | | R. B. Hough, traveling, etc., $157.34; labor, $88.90; bills, $34.12; stock, $57.93; Forestry exhibit | 338 29 |
| | | R. B. Hough, traveling, etc., $8.95; labor, $27.90; bills, $15.66, stock, $6; Forestry exhibit | 58 51 |
| | 16. | John Foord, secretary, expenses, $176.60; stock, $19.55 | 196 15 |
| | | H. Romeike, press records | 12 12 |
| | | C. M. Lang, design for illustrating book, etc | 125 00 |
| | | Frances T. Patterson, expenses, Women's Board | 48 88 |
| | | T. W. Loftus, salary, $90; traveling, $22; bills, $1.20 | 113 20 |
| | | George C. Snow, traveling, $98.65; salary account, $75; bills, $7.91; stock, $29.23; Viticulture | 210 79 |
| | 17 | F. L. Underhill, salary, clerk, Agriculture, for January | 125 00 |
| | | M. F. Pierson, expenses, $65.59; salary, $78; bills, $7.12; Agriculture | 150 71 |
| | | Metropolitan Storage and Transfer Co., January, Agriculture | 114 33 |
| | | James Wood, traveling, $34.85; bills paid, $23.29; Agriculture | 58 14 |
| | | Heliotype Printing Co., printing, Women's Board | 21 50 |
| | | Mrs. Ralph Trautman, traveling expenses, Women's Board | 15 25 |
| | | Mrs. George Waddington, traveling, $20.20; bills paid, $18; Women's Board | 38 20 |

NEW YORK STATE BUILDING

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|---|---|---|---|
| Feb. | 17. | Western Union Telegraph Co., November to February | $92 35 |
| | | W. L. Sessions, general manager, traveling expenses | 30 61 |
| | | Jackson Park Livery Stables, Chicago, account for October, 1892, Dedication | 26 50 |
| | | F. C. Parker, traveling expenses, Forestry exhibit | 34 90 |
| | | Mrs. Susie Walton, shells, Scientific exhibit | 11 40 |
| | | W. H. Gilbert, traveling, etc., $100.88; labor, $30; bills, $10.25; Dairy exhibit | 141 13 |
| | | Thomas Mattimore, canal map, Transportation exhibit | 18 75 |
| | | F. H. Elter, watchman, Chicago, State Building | 96 00 |
| | | W. F. Stetler, stenographer, 1st district | 13 33 |
| | | John E. Hetherington, stock, Apiarian exhibit | 42 08 |
| | | W. H. Williams, messenger, 7th district, salary, January | 17 33 |
| | 28. | H. J. Rogers, traveling, $63.50; bills paid, $251.22; Education. | 314 72 |
| | | Footing to March, 1893 | $156,579 13 |
| March | 2. | George S. Stevens, clerk, 3d district, salary account | 120 00 |
| | | Daniel Batcheller, labor, Agriculture | 50 00 |
| | | H. Bowen, traveling expenses, $50.98; salary, $125; bills, $18.47, Agriculture | 194 45 |
| | | Moore, Campbell & Kellner, rent, 8th district | 40 00 |
| | | George T. Smith, salary, $100; bills paid, $8.38; 8th district. | 108 38 |
| | | Lehmaier & Bro., printing 3,000 souvenir books | 500 00 |
| | | P. T. Wall, salary account, $200; bills paid, $8 | 208 00 |
| | | John H. Reynolds, salary account | 150 00 |
| | | R. H. Lansing, stenographer, salary, $14; expenses, $5.71 | 19 71 |
| | | The Argus Co., printing | 304 02 |
| | | P. J. Cuskley, agent, rent, Women's Board, February, $83.33; 1st district, rent, February, $200 | 283 33 |
| | | Anna I. Jennyss, stenographer, Women's Board, February | 50 00 |
| | | Wm. Green, clerk, 1st district, February salary | 40 00 |
| | | L. B. Tupper, janitor, 1st district, February salary | 20 00 |
| | | Edmund C. Stanton, clerk, 1st district, February salary | 208 33 |
| | 3. | H. Ries, assistant geologist, February salary, Scientific | 75 00 |
| | | E. L. Hanes, stenographer, February salary, Scientific | 55 00 |
| | | S. G. Spier, typewriter supplies, Scientific exhibit | 13 00 |
| | | Annesley & Co., supplies, Scientific exhibit | 10 80 |
| | | T. F. Romeyn, boxes, Scientific exhibit | 8 75 |
| | | L. M. Luquer, traveling, $37; labor, $16.50; bills, $1.40 | 54 90 |
| | | E. W. Vine, typewriter, rent account, Charities | 25 00 |
| | | Fay Kennell, stock, Apiarian exhibit | 4 00 |
| | | R. M. Myers & Co., stationery | 90 66 |
| | | Peter McCabe, cement, etc., Transportation exhibit | 4 75 |
| | | Mrs. Candace Wheeler, expenses, $102.20; labor, $15 | 117 20 |
| | | E. Imhauser, watchman's clock, State Building | 76 00 |
| | | J. R. Moynihan, clerk, salary, January, $100; expenses, $29.58. | 129 58 |
| | | Florence C. Ives, chief officer, Women's Board, salary, February, $166.66; traveling, $7.20; bills paid, $4.44 | 178 30 |
| | 8. | Capital District Telegraph Co., service, months November, December, January and February (4) | 8 15 |
| | | J. R. Moynihan, clerk, salary, February, $100; expenses, $12.66 | 112 66 |
| | | Anna M. Parks, stenographer, salary, February | 50 00 |
| | | Donald McNaughton, chief executive officer, salary, February. | 416 67 |
| | | John Foord, secretary, salary, February | 250 00 |
| | | Jas. F. Craig, clerk, salary, February | 75 00 |
| | | Jos. A. Cunningham, assistant clerk, salary, to March 6 | 50 00 |
| | | Ida V. Burch, stenographer, salary, February | 56 00 |
| | | Kittie Monroe, Women's Board, salary, February 10–28 | 32 00 |
| | | S. E. Van Buren, stonographer, 4th district, salary, February. | 30 00 |
| | | John M. Fake, clerk, 4th district, salary, February | 48 00 |
| | | Geo. T. Powell, traveling expenses, $39.93; salary, $150; bills, $9.48; stock bought, $26.60; Horticulture | 226 01 |
| | | L. C. Ackler, salary, February, clerk, Dairy exhibit | 50 00 |
| | | Josiah Shull, traveling, $9.57, and other bills, $8.25 | 17 82 |
| | | T. W. Loftus, salary | 90 00 |

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| March 8. | D. & M. Chauncey Co., reut, 2d district, office, February.... | $66 67 |
| | T. F. Farrell, clerk, 2d district, salary, February.. ..... | 200 00 |
| | John Phillips, clerk, 2d district, salary, February..... | 125 00 |
| | J. J. Donlon, salary, January and February, $200; traveling, $2.80; Floriculture..... | 202 80 |
| | F. L. Underhill, salary, February, Agriculture..... | 125 00 |
| | M. E. Sculley, stenographer, Charities, to February 28..... | 74 00 |
| | T. C. Leutze, labor, $204; bills, $1.75; Transportation exhibit. | 205 75 |
| | Chas. M. Pepson, labor, canal map, Transportation exhibit.. | 119 00 |
| | B. Frederick, labor, canal map, Transportation exhibit.. ... | 27 50 |
| | F. J. Dunn, labor, canal map, Transportation exhibit..... | 46 50 |
| 9. | Miss Anna Roosevelt, traveling, $29.80; labor account, $43.30; bills paid, $85.85; Women's Board..... | 158 95 |
| | Annie S. Wall, clerk, salary ..... | 28 57 |
| | Mrs. A. M. Dodge, salary account, $92; bills paid, $44.25.... | 136 25 |
| | Mrs. C. F. Wadsworth, traveling, $41.06; bills paid, $13.70.. | 54 76 |
| | Miss J. I. Howard, bills paid..... | 49 84 |
| | Emily Huntington, bills, $150; stock, $322.37..... | 472 37 |
| | J. W. Sanborn, traveling, $68.66; salary, $125; bills paid, $9.25; Ethnology..... | 202 91 |
| | H. J. Rogers, expenses, $30.65; salaries, $435; Education.... | 465 65 |
| | R. B. Hough, traveling, $51.95; salaries, $55.57; bills, $4.48. | 112 00 |
| | Drew, Allis & Co., bill for directory..... | 4 00 |
| | Albany News Co., office supplies..... | 6 78 |
| | American Express Co., bills, January and February ..... | 31 64 |
| | Albany Hardware and Iron Co., supplies, Transportation. | 12 12 |
| | Municipal Gas Co., Transportation exhibit..... | 7 40 |
| | B. R. Spelman, rent, Transportation exhibit..... | 50 00 |
| 10. | E. C. Stanton, office supplies, 1st district..... | 23 55 |
| | B. S. Curran, Jr., chief clerk, 6th district, salaries, January and February, $150; bills, $10..... | 160 00 |
| | J. F. Hawkins, chief clerk, 6th district, salary, February.... | 100 00 |
| | F. O. Howard, clerk, 6th district, salary, February..... | 83 33 |
| | J. F. Humphrey, janitor, 6th district, salary, February..... | 10 00 |
| | C. Strong, Jr., rent, 6th district, February ..... | 25 00 |
| | Metropolitan Storage and Transfer Co., Agriculture exhibit. | 132 73 |
| | Jas. Wood, traveling, $48.96; bills paid, $11.67; stock, $34.37. | 95 00 |
| | F. W. Hayden, Tifft house..... | 44 00 |
| | Ward's Natural Science Establishment, payment on State Relief Map ..... | 1,000 00 |
| | Van Heusen, Charles & Co., lamp..... | 12 00 |
| | Hudson River Telephone Co., February bill..... | 9 99 |
| | Postal Telegraph Cable Co., February bill..... | 12 38 |
| | Western Union Telegraph Co., February bill..... | 25 26 |
| 14. | Gick & Sayles, carpenter account, Scientific exhibit..... | 136 26 |
| | F. Schilling, stonecutting and polishing, Scientific exhibit.. | 942 25 |
| | H. Ries, traveling expenses, $86.98: bills, $6.37; Scientific. | 93 35 |
| | Thomas Dunn, granite, Scientific exhibit..... | 60 00 |
| | T. F. Romeyn, boxes, Scientific exhibit..... | 10 55 |
| | Thomas Cummings, labor, Scientific exhibit ..... | 51 00 |
| | F. J. H. Merrill, bills, $11.46; stock, $46.50; Scientific..... | 57 96 |
| | Fraser & Kelly, carting, Scientific exhibit..... | 38 61 |
| | W. C. Clarke, expenses, $151.70; salary, $76; Scientific ..... | 227 70 |
| | B. A. Crosby, stock for Apiarian exhibit..... | 2 00 |
| | S. A. Heath, stock for Apiarian exhibit ..... | 11 21 |
| | J. G. Faulkner, stock for Apiarian exhibit..... | 7 50 |
| | Robt. A. Weier, stock for Apiarian exhibit..... | 19 73 |
| | Geo. W. Baley & Son, stock for Apiarian exhibit..... .... | 34 84 |
| | Jay Dimock, stock for Apiarian exhibit..... | 18 00 |
| | T. L. Scofield, stock for Apiarian exhibit..... | 323 49 |
| | Lyman Reid, stock for Apiarian exhibit..... | 23 84 |
| | George Lamoreaux, stock for Apiarian exhibit..... | 12 80 |
| | E. H. Hutchins, stock for Apiarian exhibit..... | 7 45 |
| | Reported to Legislature March 20. Footing ..... | $168,027 84 |
| 23. | Walter L. Sessions, general manager, traveling expenses.... | 28 15 |

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| March 23. | Donald McNaughton, eleven bills paid in General, Women's, Forestry and Indian (Ethnology) exhibits | $419 36 |
| 24. | Geo. L. Cutter, two months' insurance on paintings, $500,000 | 2,020 00 |
| | John Foord, secretary, expense account, Chicago | 194 70 |
| | Mary H. Barrell, stenographer, Women's Board | 75 00 |
| | H. Bowen, expenses, salaries, labor and stock, Agriculture | 544 04 |
| | W. H. Gilbert, traveling expenses, $87.44; bills, $5.63; Dairy | 93 04 |
| | Katherine B. Davis, expenses Model Home | 22 53 |
| | O. L. Hershiser, eight months' salary, $500; traveling expenses, $59.14; bills paid, $31.60; Apiarian | 590 74 |
| | Lena P. Bennett, clerk, 5th dist., Feb. salary, $100; bills, $4.22 | 104 22 |
| | H. G. Avery, model of canal lock, Transportation exhibit | 162 62 |
| | Margaret Tomes, Women's Board, traveling, $6; salary account, $164.33; bills paid, $43.50 | 213 83 |
| | Frank C. Parker, traveling and other expenses, Forestry | 65 02 |
| | Bernard Frederick, labor on canal relief map, Transportation | 47 50 |
| | Donald McNaughton, bills paid, General Board, $50; Forestry, $67; Fine Arts, $1,250 | 1,367 00 |
| | John H. Reynolds, traveling expenses | 33 32 |
| | Jos. Mangene, carting, canal map, Transportation exhibit | 4 00 |
| | Frank J. Dunn, labor, canal map, Transportation exhibit | 43 00 |
| | Kittie Monroe, Women's Board | 32 00 |
| | L. M. Howland, traveling and other expenses to March 4 | 95 35 |
| 27. | T. C. Leutze, labor on canal relief map, Transportation exhibit | 222 00 |
| | Howard J. Rogers, expenses, $35.27; salaries account, $156.70; bills, $17.74; material, $309.71; Education | 519 42 |
| 28. | W. H. Benjamin, clerk, 7th district, salary, February | 100 00 |
| | H. V. Cronin, stenographer, 7th district, salary, February | 50 00 |
| | W. H. Williams, messenger, 7th district, salary, February | 16 00 |
| | E. S. Sterry, photographs and enlargements, Transportation | 193 96 |
| | C. M. Pepson, labor, canal relief map, Transportation | 122 50 |
| | B. W. Wooster Furniture Co., chair and table, Scientific | 8 00 |
| | Arthur Hoilick, traveling and bills paid, Scientific | 9 90 |
| | Metropolitan Telegraph and Telephone Co., 1st district, two months' bill | 59 20 |
| | Miss C. E. Dennis, traveling expenses, Women's Board | 47 27 |
| | Mrs. W. J. Averell, bills paid, Women's Board | 13 74 |
| | W. S. Budworth & Son, rent, carting, packing and freight Women's Board | 334 25 |
| | S. G. Speir, typewriter and supplies, Women's Board | 122 85 |
| | A. C. Hopkins, photographs, Charities exhibit | 71 00 |
| | Fraser & Kelly, carting, two months, Scientific | 64 41 |
| | Scrantom, Wetmore & Co., stationery | 93 05 |
| | National Express Co., February bill | 11 27 |
| | Holbrook Bros., glass, Forestry | 72 80 |
| | M. F. Pierson, labor, Agriculture | 75 00 |
| | W. H. Gage, labor, Agriculture | 81 00 |
| | E. Z. Frazee, labor, $217.24; traveling, $75; bill, $5.63; Agriculture | 297 87 |
| | F. H. Vick, salary, February, Floriculture | 100 00 |
| | Addison P. Wilbur, statistical charts, Charities | 77 88 |
| | Samuel D. Backus, map, Charities | 354 00 |
| | C. F. Dodd, honey, Apiarian | 4 80 |
| | F. E. Dowley, traveling expenses, etc., Poultry | 22 52 |
| | G. C. Snow, expenses, $114.27; salaries account, $76.50; Viticulture | 190 77 |
| | Chas. F. Roe, horses account, Troop A, Chicago dedication | 492 00 |
| | Moore, Campbell & Kellner, February rent, 8th district | 40 00 |
| | Geo. T. Smith, clerk, Feb. salary, $100; bills, $6.75; 8th dist. | 106 75 |
| | W. B. Kirk, rent, February, 5th district | 30 00 |
| | H. S. Escourt, clerk, 4th district, February salary, $100; traveling expenses, $2.85; bills, $3.75; photographs, $10 | 116 60 |
| 30. | E. C. Cook, commissioner, 7th district, expense account | 106 20 |
| | Wm. B. Tuthill, secretary, traveling account, $7; labor account, $1,268.40; expenses, $536.15; Fine Arts exhibit | 1,811 55 |
| | Fred C. Puls & Co., printing, Fine Arts exhibit | 103 40 |

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| March | 30. | J. Q. A. Ward, traveling expenses, salary account and bills paid, Fine Arts exhibit | $62 25 |
| | | O. L. Warner, labor, packing department, Fine Arts exhibit. | 142 22 |
| | | Louis F. Massett, subsistence account, Fine Arts exhibit | 225 70 |
| | 31. | Anna I. Jennyss, stenographer, March salary, $50; expenses, $12.80; Women's Board | 62 80 |
| | | P. J. Cuskley, rent, March, 1st district, $100; rent, $83.33; Women's Board | 183 33 |
| | | Geo. S. Stevens, clerk, March, 3d dist., $120; express, 60 cents. | 120 60 |
| | | E. L. Hanes, stenographer, 3d district, Scientific exhibit | 55 00 |
| | | Thomas Cumming, labor, Scientific exhibit | 50 00 |
| | | Henrich Ries, salary, March, Scientific exhibit | 75 00 |
| | | Rand, McNally & Co., Atlas of the World | 36 00 |
| | | P. T. Wall, salary account | 200 00 |
| | | Donald McNaughton, chief executive officer, March salary | 416 67 |
| | | Footing to April, 1893 | $181,954 79 |
| April | 7. | The Argus Co., printing account, Women's Board, $35.75; General Board, $194.78 | 230 53 |
| | | Wm. Green, clerk, 1st district, March salary | 45 00 |
| | | E. C. Stanton, clerk, 1st district, March salary | 208 33 |
| | | John Phillips, clerk, 2d district, March salary | 125 00 |
| | | T. F. Farrell, clerk, 2d district, March salary | 200 00 |
| | | D. & M. Chauncey Co., 2d district, March rent, office | 66 67 |
| | | John Foord, secretary, General Board, March salary | 250 00 |
| | | Ida V. Burch, stenographer, General Board, March salary | 66 00 |
| | | Jno. R. Moynihan, clerk, General Board, March salary | 100 00 |
| | | Jas. F. Craig, clerk, General Board, March salary | 100 00 |
| | | Anna M. Parks, stenographer, General Board, March salary | 50 00 |
| | | Alice C. Morse, drawing, Women's Board | 20 00 |
| | | Mrs. F. P. Bellamy, expenses and bills, Women's Board | 108 08 |
| | | M. Delehanty's Sons, frames, Scientific exhibit | 7 00 |
| | | Hudson Valley Paper Co., boxes, Scientific exhibit | 8 05 |
| | | R. B. Hough, various bills paid, Forestry | 139 23 |
| | | F. H. Vick, salary $19.38; expenses, $23.13; Floriculture | 42 51 |
| | | H. J. Rogers, bill for salaries and material, Education | 679 40 |
| | | W. H. Gilbert, traveling expense account, Dairy | 116 30 |
| | | Chas. Louis Hinton, statue, H. Hudson, State Building | 960 75 |
| | | Chas. Caryl Coleman, frescoes, State Building | 1,000 00 |
| | 8. | Geo. A. Fuller & Co., on account, building contract | 15,000 00 |
| | | B. J. McCarthy, six months' salary as clerk, 5th district | 694 13 |
| | 18 | L. C. Ackler, stenographer, salary, March, Dairy | 50 00 |
| | | Josiah Shull, traveling expenses, bills paid, Dairy | 52 92 |
| | | Peter Collier, seven bills paid, Experiment Station work, Dairy exhibit | 377 65 |
| | | Onondaga County Milk Association, milk for cheese, Dairy | 279 00 |
| | | L. B. Williams, photographs of dairy farms, etc., Dairy | 219 60 |
| | | W. H. Gilbert, traveling expenses, etc., Dairy | 103 52 |
| | | M. F. Pierson, labor, $81; bills paid, $48.59; Agriculture | 129 59 |
| | | F. L. Underhill, salary, March, as clerk, Agriculture | 125 00 |
| | | W. H. Gage, labor, Agriculture | 81 00 |
| | | H. J. Rogers, labor account, material, etc., Education | 778 89 |
| | | John W. Sanborn, expenses, salary, $125; March bills, $79.47; Ethnology | 204 97 |
| | | A. L. Hough, traveling expenses, photographer, Forestry | 91 53 |
| | | Geo. T. Powell, salary account and expenses, Horticulture | 363 76 |
| | | Jas. J. Donlan, salary, $100; traveling, $28.50; Floriculture | 128 50 |
| | | John H. Reynolds, clerk, General Board, salary, March | 150 00 |
| | | M E. Scully, stenographer, Charities, $54; General Board, $8. | 62 00 |
| | | W. L. Sessions, general manager, traveling expenses | 27 22 |
| | | Jos. A. Cunningham, clerk, General Board, salary account | 40 00 |
| | | H. S. Estcourt, clerk, 4th dist., salary, March, $100; bills, $21. | 121 00 |
| | | Jno. M. Fake, clerk, 4th district, salary, March | 54 00 |
| | | S. E. Van Buren, stenographer, 4th district, salary, March | 25 00 |
| | | Lena P. Bennett, clerk, 5th district, salary $100; March bills, $7.59 | 107 59 |

COOKING SCHOOL EXHIBIT

| | | |
|---|---|---|
| April 18. | W. R. Shayes, photographs, 5th district | $9 00 |
| | W. B. Kirk, March rent, 5th district | 30 00 |
| | Smith Premier Typewriter Co., rent, 5th district | 50 00 |
| | B. J. McCarthy, clerk, salary, February and March, 5th district | 239 20 |
| | F. O. Howard, clerk, salary, February and March | 83 98 |
| | J. F. Humphrey, janitor, salary, January and March, 6th dist. | 10 00 |
| | Binghamton General Electric Co., lighting account, 6th dist. | 12 00 |
| | J. F. Hawkins, chief clerk, salary, March, 6th district | 100 00 |
| | Cyrus Strong, rent office, March, 6th district | 25 00 |
| | B. S. Curran, Jr., clerk, salary, $75; bills, $5.25; 6th district | 80 25 |
| | W. H. Williams, messenger, salary, March, 7th district | 18 00 |
| | H. V. Cronin, stenographer, salary, March, 7th district | 50 00 |
| | W. H. Benjamin, chief clerk, salary, March, 7th district | 100 00 |
| | George T. Smith, chief clerk, salary, March, 8th district | 100 00 |
| | Bell Telephone Co., account to date, 8th district | 67 13 |
| | H. B. Mead, illuminating gas, March, 8th district | 50 |
| | Buffalo Natural Gas Fuel Co., 8th district | 1 00 |
| | Moore, Campbell & Kellner, rent, March, 8th district | 40 00 |
| | Postal Telegraph Cable Co., 8th district | 4 33 |
| | A. W. Townsend & Co., 8th district | 3 00 |
| | Peter Paul & Bro., stationery, 8th district | 14 51 |
| | Fannie L. Cole, administratrix estate W. H. Cole, late clerk of the 5th district | 269 49 |
| | American Express Co., Women's Board, $5.95; General, $34.12. | 40 07 |
| | National Express Co. | 11 50 |
| | The Argus Co., printing, Women's Board, $17.95; General Board, $37.90 | 55 85 |
| | Western Union Telegraph Co., March, Women's Board, $13.80; General Board, $81.41 | 95 21 |
| | F. C. Manning, stationery | 27 66 |
| | Post-Express Co., printing | 9 75 |
| | R. M. Myers & Co., stationery | 11 89 |
| | E. S. Sterry, photographs and enlargements, all departments. | 706 80 |
| | Postal Telegraph Cable Co., March | 18 48 |
| | Hudson River Telephone Co., March | 32 59 |
| | Union and Advertiser Co., printing | 14 00 |
| | Henry Romeike, press records | 15 75 |
| | Mrs. H. C. Cullen, stenographer, Chicago | 18 00 |
| | Fraser & Kelly, carting, Scientific exhibit | 106 76 |
| | A. M. Collins Manufacturing Co., supplies, Scientific | 30 95 |
| | Merchants' Despatch Transportation Co., freight, Scientific | 143 70 |
| | Heinrich Ries, traveling and other expenses, Scientific | 102 80 |
| | Mary H. Barrell, stenographer, Women's Board | 57 00 |
| | John I. Covington, insurance, Women's Board | 126 00 |
| | Mrs. Ralph Trautman, traveling expenses, Women's Board | 14 25 |
| | Miss Anna Roosevelt, paid bills of salaries, etc., Women's Board | 185 11 |
| | G. C. Snow, paid bills of salaries, etc., Viticulture | 215 97 |
| | F. C. Parker, traveling expenses, etc., Forestry | 32 26 |
| | O. L. Hershiser, salary, March, $62.50; expenses, $21.40; Apiarian | 83 90 |
| | R. Swaine Gifford, traveling expenses, Fine Arts | 20 25 |
| | O. L. Warner, paid bills for packing, Fine Arts | 125 24 |
| | New York and New Jersey Telephone Co., 2d district | 55 82 |
| | L. B. Tupper, janitor, February, 1st district | 20 00 |
| | E. G. Ferguson, watchman, State Building, Chicago | 14 00 |
| | Herter Bros., mosaic floor, State Building, Chicago | 2,500 00 |
| | T. W. Gray, coal bill, New York State Building, Chicago | 23 25 |
| | B. R. Spelman, rent, canal relief map, Transportation | 50 00 |
| | Thomas Mattimore, coal, canal relief map, Transportation | 7 79 |
| | F. Newman, bridges, canal relief map, Transportation | 18 75 |
| | Albany Hardware and Iron Co., supplies, canal relief map, Transportation | 2 76 |
| | Charles Mickel, painter, supplies, canal relief map, Transportation | 40 89 |

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| April 18. | J. N. Willard, Jr., packing, canal relief map, Transportation. | $9 00 |
| | I. D. McClaskey, carting, canal relief map, Transportation.. | 11 50 |
| | McClure, Walker & Gibson, paint, etc., canal relief map, Transportation | 26 09 |
| | Wm. Fuller & Sons, cement and plaster, canal relief map, Transportation | 35 00 |
| | Mrs. F. C. Ives, chief officer, Women's Board, March salary, $166.66, and bills paid, $67.22 | 233 88 |
| | Margaret Tomes, clerk, Women's Board, salary and bills.... | 165 80 |
| | Daniel Brown, photographs, Ethnology exhibit | 24 00 |
| | Tiffany & Co., printing, 1st district | 38 84 |
| | George G. Peck, sign, 1st district | 3 00 |
| | Metropolitan Telegraph and Telephone Co., 1st district..... | 32 40 |
| | F. J. H. Merrill, office expenses, Scientific exhibit | 43 10 |
| | Wm. B. Dwight, salary, $9; expenses, $59.79; Scientific. | 68 79 |
| | S. G. Spier, typewriter account, Scientific | 21 70 |
| | F. Schilling, cutting and polishing stones, obelisk, $474.60, $349.33, Scientific | 823 93 |
| | M. Delehanty's Son, zinc frames, Scientific | 50 00 |
| | Jas. E. Bailey, granite block, Scientific | 43 00 |
| | Merchants Despatch Transportation Co., canal relief map.. | 264 00 |
| | H. G. Avery, model canal locks, March bill, Transportation.. | 668 59 |
| | Isabel A. Hampton, traveling expenses, Women's Board..... | 62 25 |
| | H. Bowen, salaries, labor, supplies, vouchers, Agriculture... | 569 37 |
| | John Foord, expense bill for March | 212 90 |
| | Walter L. Sessions, general manager, traveling expenses .... | 26 97 |
| | Kittie Monroe, clerk | 40 00 |
| 22. | Hayden Furniture Co., installation cases, Agriculture | 5,436 99 |
| | L. M. Howland, traveling expenses, March, Chicago trip.... | 155 14 |
| | F. D. Millet, one-third payment on contract for decorating reception hall, New York State Building, Chicago | 3,000 00 |
| | J. G. Coder, work for Forestry, Scientific, Agricultural and Model Home | 1,970 00 |
| | Wechsler & Abraham, supplies for Model Home exhibit..... | 59 72 |
| | T. W. Loftus, salary, March, $90; bill paid, $6; State Building. | 96 00 |
| | A. J. Zabriskie, photograph of Gettysburg monuments for New York soldiers | 53 85 |
| | H. J. Rogers, eighteen bills paid in Educational exhibit. | 898 02 |
| | Wm. Deyermand & Co., glass jars, etc., Scientific | 23 20 |
| | The Argus Co., printing, Scientific | 28 20 |
| | Edmund C. Stanton, office supplies, 1st district | 17 25 |
| | Birdsall Jackson, labor, Women's Board | 40 00 |
| | Donald McNaughton, bills paid, Horticulture, Ethnology, $330.23, $290 18 | 620 41 |
| 25. | P. Collier. Experiment Station, bills in Agricultural and Dairy exhibits | 377 84 |
| | Metropolitan Storage and Transfer Co., storage and freight, Agriculture | 127 81 |
| | F. J. H. Merrill, traveling expenses, Chicago, Scientific..... | 83 63 |
| | C. Dorflinger's Sons, glass bottles, jars, etc., Scientific. ..... | 268 60 |
| | W. C. Clarke, services, $32, expenses, $46.73 | 78 73 |
| | University State New York, clerical work, Ethnology | 8 80 |
| | Prison Association, New York, clerical work, Charities ..... | 41 60 |
| | Wm. Schill, two bills, $660.30, $847.85, services and disbursements, Fine Arts | 1,508 15 |
| | McCully & Miles, glass work and medallions, Women's Board | 176 60 |
| | Alice C. Morse, services and expenses, Women's Board..... | 6 12 |
| | Alfred D. Beeken, printing books and circulars, Women's Board | 92 00 |
| | Patrick McCann, carpenter work, canal relief map, Transportation | 417 55 |
| | J. Sanford, pictures, Indian schools, Education | 193 04 |
| | Geo. Smith, use of kiln and services, Forestry | 97 25 |
| | Romeyn B. Hough, traveling, freight, labor, Forestry | 427 46 |
| 28. | H. G. Avery, labor on model of canal locks, Transportation.. | 447 86 |

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| April | 28. | T. C. Leutze, labor and traveling, Chicago, canal relief map, Transportation | $343 95 |
| | | Kuhne Beveridge, bust of Dewitt Clinton, Transportation | 250 00 |
| | | Footing to May, 1893 | $232,906 78 |
| May | 2. | E. L. Hanes, salary, stenographer, Scientific | 55 00 |
| | | P. T. Wall, salary, clerk, General Board | 200 00 |
| | | G. S. Stevens, salary, clerk, $120; bills, $7; Women's Board. | 127 00 |
| | | J. R. Moynihan, salary, clerk, April, General Board | 100 00 |
| | | Donald McNaughton, April salary, General Board | 416 67 |
| | | James F. Craig, clerk, April, General Board | 100 00 |
| | | Ida V. Burch, stenographer, April, General Board | 56 00 |
| | | N. D. DeGraff, clerk, salary, April and May, General Board. | 200 00 |
| | | J. A. Cunningham, clerk, April, General Board | 40 00 |
| | | Jno. H. Reynolds, clerk, salary, $150; traveling, $11.25, April | 161 25 |
| | | E. M. Johnson, photographs, 4th district | 12 00 |
| | | F. A. Green, photographs, schools, Education | 11 09 |
| | | J. H. Hecker, labor and traveling expenses, Dairy | 68 71 |
| | | Georgia L. Fanning, services, Charity exhibit | 24 00 |
| | | Jno. G. Myers, curtains, etc., canal relief map, Transportation. | 45 40 |
| | | B. R. Spelman, rent store, canal relief map, Transportation. | 50 00 |
| | | Albany Hardware and Iron Co., nails, etc., canal relief map, Transportation | 73 |
| | | Keuffel & Esser, paper for map, Transportation | 89 85 |
| | | C. M. Pepson, labor for canal relief map, Transportation. | 28 00 |
| | | McClure, Walker & Gibson, paints, canal relief map, Transportation | 5 74 |
| | | Municipal Gas Co., gas, canal relief map, Transportation. | 11 20 |
| | | A. L. Hough, photographs, $197.50; expenses, $77.28; Forestry. | 274 78 |
| | | A. S. Miner, office furniture, 6th district | 8 50 |
| | | Sisson Bro. & Weldon, office furnishing, etc., 6th district | 391 39 |
| | | Tiffany & Co., printing, 1st district | 20 63 |
| | | Gorton W. Allen, vice-president, requisition No. 1 (see supplementary list of expenditures, payments made from requisition fund) | 10,000 00 |
| | 9. | Howard J. Rogers, bills of printing, labor, freight, traveling expenses, material, Education | 1,022 02 |
| | | John C. Ure, on contract, grading, State Building, Chicago | 400 00 |
| | | John Foord, salary account | 250 00 |
| | | Anna I. Jennyss, stenographer, salary, Women's Board | 50 00 |
| | | P. J. Cuskley, rent, April, Women's Board | 83 33 |
| | | A. H. Revell & Co., desk, Women's Board | 25 00 |
| | | Wm. Mavor, showcases for Wool and Apiarian exhibits | 575 55 |
| | | Abraham & Strauss, furnishing goods, Model Home | 53 63 |
| | 18. | Florence C. Ives, salary, $166.66; traveling expenses, bills paid, $194.20; Women's Board | 360 86 |
| | | Margaret Tomes, salary, $125; bills paid, $156.83; Applied Arts, Women's Board | 281 83 |
| | | Miss M. M. Love, expenses paid, Children's Building, Women's Board | 156 21 |
| | | Miss C. E. Dennis, traveling expenses, bills, Women's Board. | 92 23 |
| | | F. J. H. Merrill, bills paid, vouchers, Scientific | 51 77 |
| | | H. D. Vulte, analyses of clay, ore, etc., Scientific | 193 25 |
| | | Wm Deyermand & Co., glass, Scientific | 1 90 |
| | | A. M. Collins Manufacturing Co., cardboard, Scientific | 4 88 |
| | | Annesley & Co., two dozen Minton tiles, Scientific | 14 00 |
| | | Thos. Cummings, labor, Scientific | 54 00 |
| | | Fraser & Kelly, carting, Scientific | 22 76 |
| | | Chas. H. Peck, expenses installing Fungi exhibit | 100 25 |
| | | Whitall, Tatum & Co., show jars and bottles, Agriculture | 170 82 |
| | | James Wood, traveling expenses and bills paid, Agriculture. | 252 70 |
| | | F. L. Underhill, salary, April, Agriculture | 125 00 |
| | | Josiah Shull, traveling expenses, bills paid, Dairy | 60 35 |
| | | L. C. Ackler, stenographer, Dairy | 50 00 |
| | | A. B. Davis, labor, $12; expenses, $2; Dairy | 14 00 |

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| May | 18. | Hayden Furniture Co., showcases, frames, wainscoting, tables, cabinets, etc. (contract), Education | $12,322 03 |
| | | S. D. Backus, statistical charts, Charities exhibit | 322 00 |
| | | A. P. Wilbur, assistant on charts, Charities exhibit | 40 59 |
| | | Western Union Telegraph Co., bill for April | 70 89 |
| | | Daniel Brown, photographs for three exhibits | 36 00 |
| | | Ward's Natural Science Establishment, work on relief map | 1,000 00 |
| | | D. C. Durfee, photograph work | 11 00 |
| | | Postal Telegraph Cable Co., April bill | 15 33 |
| | | Hudson River Telephone Co., bill for April | 23 34 |
| | | J. W. Gillis Co., picture frames, freight, etc | 298 90 |
| | | National Express Co., bill for April | 26 08 |
| | | John Foord, expenses and bills, April | 212 96 |
| | | E. Wegman, expenses and bills, Croton Water exhibit | 43 70 |
| | | Rand, McNally & Co., desk | 25 00 |
| | | F. O. Armstrong, night watchman, State Building, Chicago | 60 00 |
| | | T. W. Gray, coal, State Building, Chicago | 75 00 |
| | | C. G. Braxmar, badges, Naval Review, New York | 32 00 |
| | | C. W. Gibbs, agent, Knickerbocker Steamboat Co., Naval Review, New York, chartering steamer | 2,000 00 |
| | | J. Wunder & Co., glass sign, Transportation exhibit | 12 00 |
| | | Katharine B. Davis, supplies, etc., Workingman's Home | 15 75 |
| | | W. H. Benjamin, expenses, etc., clerk, 8th district | 39 68 |
| | | John W. Sanborn, salary, $125; expenses, $33.98; Indian | 158 98 |
| | | W. L. Sessions, traveling expenses | 32 62 |
| | | George A. Fuller Co., payment, construction State Building | 15,000 00 |
| | 23. | George T. Powell, salary, supplies, expenses, Horticulture | 1,134 19 |
| | 25. | W. S. Budworth & Son, cartage, packing, labor, etc., Women's Board | 239 15 |
| | | American Express Co., Women's Board | 114 00 |
| | | Mrs. F. P. Bellamy, expenses and bills, Library exhibit, Women's Board | 532 10 |
| | | Miss Anna Roosevelt, expenses and bills paid, Women's Board | 476 35 |
| | | Juliet Corson, Cooking School exhibit, Women's Board | 1,000 00 |
| | | F. M. Crossett, printing catalogue, Women's Board | 24 00 |
| | | W. J. Smith, decorating State Building, October 21, 1892 | 1,350 00 |
| | | T. W. Loftus, salary account, New York State Building | 90 00 |
| | | G. M. Doolittle, three colonies bees, Apiarian | 27 00 |
| | | Mary E. Scully, stenographer, Charities | 50 00 |
| | | James J. Donlan, salary and bills paid, Floriculture | 329 55 |
| | | Donald McNaughton, printing and postage bills | 135 00 |
| | | New York Central and Hudson River R. R. Co., freight bills, Transportation exhibit, $8.42; Scientific, $3.37 and $34.68. | 46 47 |
| | 31. | F. D. Millett, on account, decoration, State Building | 6,000 00 |
| | | C. C. Coleman, decorating staircase, etc., State Building | 1,500 00 |
| | | James McKinney & Son, iron brackets, Scientific exhibit | 26 00 |
| | | T. F. Romeyn, boxes for Scientific exhibit | 30 55 |
| | | Heinrich Ries, salary, expenses and bills paid, Scientific | 220 08 |
| | | John G. Coder, pavilions, platforms, etc., Forestry exhibit, $132.50, and Scientific exhibit, $122.75 | 255 25 |
| | | W. B. Kirk, office rent, storage, etc., 5th district | 20 00 |
| | | Emily Huntington, expenses, freight, etc., Women's Board | 127 20 |
| | | Emma B. Dunlap, construction Children's Building, Women's Board | 2,000 00 |
| | | Footing to June, 1893 | $297,471 80 |
| June | 8. | G. W. Allen, vice-president, on requisition No. 2 (see supplementary list of expenditures) | 10,000 00 |
| | 9. | Jas. F. Craig, clerk, salary, etc | 101 00 |
| | | Jos. Cunningham, messenger | 45 00 |
| | | P. T. Wall, salary account | 200 00 |
| | 13. | E. U. Jones, work on floor of Agricultural exhibit | 36 50 |
| | | E. Z. Frazee, labor and expenses, Tobacco exhibit | 123 24 |
| | | M. F. Pierson, labor and expenses, Grain and Potato exhibit, Agriculture | 270 47 |
| | | Herman Berg & Co., pedestal for library, Women's Board | 20 00 |

SOLDIERS' MONUMENTS EXHIBIT

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| June | 13. | Arnold, Constable & Co., Wilton carpet, etc., Women's Board. | $267 75 |
| | | Dora W. Keith, traveling expenses, etc., Women's Board.... | 190 00 |
| | | Mrs. F. R. Jones, expenses and bills paid, exhibit of colonial goods and relics, Women's Board..... | 2,028 72 |
| | | H. Ries, salary, expenses and bills paid, Scientific exhibit.... | 172 88 |
| | | F. J. H. Merrill, expenses and bills, Scientific..... | 192 78 |
| | | F. Schilling, expenses and labor, $117.80; work cutting obelisk, $763.30, and cutting and polishing stone, $70.50; Scientific. | 951 60 |
| | | N. Y. C. & H. R. R. Co. (Merchants' Despatch Transportation Co.), freight bills for general board, $17.06; Women's Board, $3.18; Scientific exhibit, $192 and $102.75..... | 314 99 |
| | | D. Brown, photographs and enlargements, Transportation... | 250 00 |
| | | J. W. Gillis Co., picture frames, etc., Transportation..... | 105 20 |
| | | G. H. Gallagher & Co., partitions, Transportation..... | 215 00 |
| | | John C. Ure, grading and sodding, State Building lot..... | 420 00 |
| | | C. C. Coleman, decoration, State Building..... | 500 00 |
| | | T. W. Gray, coal account, State Building ..... | 135 00 |
| | | Geo. A. Elter, watchman, State Building..... | 56 00 |
| | | Capital District Telegraph Co., service, March to June..... | 3 80 |
| | | Albany News Co., stationery, office..... | 7 16 |
| | | Gillis Bros., printing tags, etc..... | 28 00 |
| | | W. H. Tipton, 103 photographs, New York soldiers' monument, Gettysburg..... | 100 00 |
| | | Jas. B. Lyon, register of visitors, Chicago..... | 75 00 |
| | | National Express Co., bill for May..... | 5 04 |
| | | John Bogart, preparation of map, etc., Quarantine exhibit .. | 100 00 |
| | | R. B. Hough, salary and expenses, May, Forestry..... | 250 00 |
| | | T. J. Whitney, traveling expenses, 4th district..... | 34 17 |
| | | H. J. Rogers, bills paid, Educational exhibit..... | 583 15 |
| | | M. B. Mattice, traveling expenses, etc., 3d district..... | 13 22 |
| | | C. Harry Eaton, printing bills, Fine Arts..... | 60 00 |
| | | H. S. Patten, model of Utica State Hospital, Charities..... | 407 57 |
| | | John G. Coder, balance on Workingman's Model Home, $1,000; entrance pavilion, Transportation exhibit, $1,200, and pavilion and installation, Scientific exhibit, $8,500.... | 10,700 00 |
| | | T. W. Loftus, services and bills paid..... | 112 15 |
| | | Jno. T. Norton, traveling expenses, 3d district..... | 25 20 |
| | | Horace Davis, services and expenses, Oils exhibit, Scientific. | 61 50 |
| | | W. H. Glenny, Sons & Co., jars, glass, etc., Apiarian..... | 106 99 |
| | | Lee, Holland & Co., crates and boxes, Apiarian..... | 21 28 |
| | | Josiah Jewett, storage, etc., Apiarian..... | 106 50 |
| | | Crane Co., railing, Horticulture ..... | 35 00 |
| | | B. F. White, seventy-seven bromide enlargements, photographs, Viticulture..... | 88 00 |
| | | Carson, Pirie, Scott & Co., carpet, rugs, etc., Viticulture.... | 61 04 |
| | | Hayden Furniture Co., cases and cabinets, Viticulture..... | 908 00 |
| | 14. | F. Loeser & Co., furnishings, Workingman's Model Home... | 131 48 |
| | | F. J. Sarmiento & Co., kalsomining and painting, $800, and decorating and gilding, $750, State Building..... | 1,550 00 |
| | | E. C. Potter, modeling lions and pedestals, State Building... | 1,500 00 |
| | | O. L. Warner, payment on busts and statues, State Building. | 4,000 00 |
| | | E. F. Hawley, milk for butter and cheese, Dairy..... | 409 60 |
| | | M. R. Wait, soliciting exhibits, Dairy..... | 104 67 |
| | | Josiah Shull, expenses and bills paid, Dairy ..... | 55 19 |
| | | C. D. Munsell, printing, etc., Dairy..... | 38 25 |
| | | Geo. Tunnicliffe, engraving, etc., Dairy..... | 85 00 |
| | | Austin, Nichols & Co., cheese, etc., Dairy..... | 125 87 |
| | | J. W Gillis Co., glass for frames..... | 36 00 |
| | | McArthur Bros., case for Viticulture..... | 475 00 |
| | | James Wood, expenses and bills paid, Agriculture..... | 116 53 |
| | | F. L Underhill, salary, May, Live Stock..... | 125 00 |
| | | J. E. Didama, salary, April, Agriculture..... | 140 00 |
| | | H. Bowen, salary, expenses, bills paid, Agriculture..... | 376 88 |
| | | John Chadwick & Co., vase, etc., Women's Board..... | 25 35 |
| | | Mrs. A. M. Dodge, bill for Crèche and Nursery exhibit, $924, Loan exhibit, laces, etc., $2,772.26; Women's Board..... | 3,696 26 |

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| June 14. | Mrs. C. F. Wadsworth, traveling expenses, Women's Board. | $88 70 |
| | Mrs. F. R. Halsey, traveling expenses, etc., Women's Board.. | 47 50 |
| | Hayden Furniture Co., cases, cabinets, etc., Women's Board. | 3,375 00 |
| | F. Florentine & Son, twelve showcases, Applied Arts, Women's Board | 72 00 |
| | J. A. Colby & Sons, seven showcases, Women's Board | 684 00 |
| | Heliotype Printing Co., 5,000 seals, serrated edges, Women's Board | 87 50 |
| | Schraps & Kahn, supplies, Women's Board | 35 00 |
| 15. | Geo. D. Milligan Co., tinting ceilings, State Building | 340 00 |
| | Geo. S. Stevens, salary account | 200 00 |
| | Western Union Telegraph Co., account for May | 28 87 |
| | Wm. B. Marshall, traveling expenses, etc., Scientific | 87 50 |
| | S. L. Conklin, typewriting, Library exhibit, Women's Board. | 190 65 |
| | Miss M. M. Love, expenses and bills, Crèche exhibit, Women's Board | 716 61 |
| | Heliotype Printing Co., stationery supplies, Women's Board. | 92 50 |
| | Sisson Bros. & Weldon, packing, etc., 6th district | 5 50 |
| | Wm. Mavor, three cases for Apiarian exhibit | 346 00 |
| | Jas. H. Rice Co., glass, Forestry exhibit | 30 30 |
| | Emil A. July & Co., posts, etc., Forestry exhibit | 244 00 |
| | Luther Tucker & Sons, advertising bills | 74 60 |
| | Jas. J. Donlon, salary and expenses, Floriculture, May | 213 00 |
| | H. J. Rogers, thirty-four bills paid, Educational | 252 29 |
| 19. | Mrs. F. P. Bellamy, bills, Library exhibit, Women's Board.. | 221 34 |
| | Mrs. A. M. Dodge, bills, Statistics exhibit, Women's Board.. | 181 80 |
| | W. S. Budworth & Son, packing 2,400 volumes, Women's Board | 70 00 |
| | J. Dunfee & Co., flooring for library, Women's Board | 135 00 |
| | Ellin, Kitson & Co., models and moulds, State Building | 3,300 00 |
| | W. J. Smith, eight flags, State Building | 81 73 |
| | International Steel Post Co., fence, State Building | 73 68 |
| | John I. Covington, insurance, three exhibits, State Building. | 1,167 50 |
| | Whitall, Tatum & Co., glass jars, Dairy exhibit | 16 50 |
| | Jesse Owen, soliciting exhibits, Dairy exhibit | 9 50 |
| | M. S. Ackler, services, Dairy exhibit | 45 00 |
| | A. B. Davis, expenses and services, Dairy exhibit | 19 00 |
| | Citizens' Publishing Co., printing, Dairy exhibit | 10 50 |
| | John G. Coder, tables, $17, Horticulture; work at Working man's Home, $85 | 102 00 |
| | E. S. Sterry, photographing and supplies, General Board and Education, $280.25; Transportation, $40.19 | 320 44 |
| | Wm. Schwarzwaelder & Co., packing furniture, 1st district.. | 49 82 |
| | Rand, McNally & Co., flags and printing for exhibits | 81 75 |
| | C. H. Smyth, Jr., cutting stones, Scientific exhibit | 10 57 |
| | O. L. Hershier, salary, expenses, bills paid, Apiarian | 357 95 |
| | Binghamton House Furnishing Co., packing furniture, 6th district | 14 15 |
| | F. L. Maine, advertising, 5th district | 7 50 |
| | George T. Powell, salaries, bills, expenses, etc., Horticulture. | 1,877 66 |
| 23. | A. R. Eastman, services and expenses, Dairy | 87 37 |
| | James Dean, expenses, stock and bills paid in Floriculture exhibit, $107.25, $263.11, $50.71, $977.18, $251.45, $2,370.62. | 4,020 32 |
| 26. | John W. Sanborn, salary and bills paid, Indian | 490 22 |
| | J. A. Colby & Sons, glass, Autograph exhibit, Women's Board | 14 17 |
| | Chicago Carpet Co., laying library carpet, Women's Board.. | 10 20 |
| | Western Union Telegraph Co., May account, Women's Board. | 4 13 |
| | Yale & Towne Mfg. Co., locks, etc., Women's Board | 23 58 |
| | W. S. Budworth & Son, carting, packing, Women's Board | 9 55 |
| | F. P. Garrettson & Co., supplies, Women's Board | 8 70 |
| | Hudson River Telephone Co., account for May | 8 84 |
| | A. J. Parker, receiver, etc., printing and books | 7 00 |
| | S. G. Spier, typewriter rental, etc | 14 25 |
| | T. J. Blake, repairing furniture, packing, etc | 6 50 |
| 29. | George C. Snow, expenses and bills paid, Viticulture | 515 43 |

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| June | 29. | H. J. Rogers, signs, charts, awnings, etc., Education | $326 61 |
| | | J. H. A. Walthausen, rent, studio, etc., plaster cast Hudson. | 200 00 |
| | | L. S. Baldwin & Co., brass railing, etc., Transportation | 230 50 |
| | | J. H. Kintz, livery bill | 32 50 |
| | | R. B. Wing & Son, State flag | 35 00 |
| | | A. C. McClurg & Co., stationery, New York State Building | 63 09 |
| | | John C. Barnard, furnishings, New York State Building | 42 70 |
| | | A. M. Starkweather, showcase, Women's Board | 51 18 |
| | | Footing to July, 1893 | $362,518 53 |
| July | 5. | G. W. Allen, vice-president, on requisition No. 3 (see supplementary list of expenditures) | 10,000 00 |
| | | Donald McNaughton, salary account, June | 416 67 |
| | | Geo. S. Stevens, salary account | 200 00 |
| | | Post-Express Printing Co., office printing | 31 00 |
| | | P. T. Wall, salary | 200 00 |
| | | Jas. F. Craig, salary | 102 00 |
| | | T. W. Loftus, salary account | 100 00 |
| | | Wm. MacNaughton, services and expenses, Agriculture | 29 70 |
| | | Howard J. Rogers, eight bills paid, Education | 516 44 |
| | | Manville & Phelps, printing cards, Forestry | 20 00 |
| | | A. H. Andrews & Co., copper railing, Forestry | 190 00 |
| | | Thayer & Jackson Stationery Co., printing, Workingman's Home | 35 75 |
| | | E. Baggott, gas fixtures, Workingman's Home | 27 70 |
| | | Geo. R. Wright & Co., refrigerators, etc., State Building | 98 90 |
| | | J. W. Gillis Co., frames, glass, etc., Charities | 87 50 |
| | | Rand, McNally & Co, map, $400, and express, Transportation. | 402 55 |
| | | Philip Strobel & Sons, furniture, Women's Board | 351 78 |
| | | L. C. Ackler, stenographer, Dairy exhibit | 50 00 |
| | 14. | Geo. A. Fuller Co., balance construction, State Building | 39,108 78 |
| | | Z. R. Brockway, superintendent, exhibit Elmira Reformatory. | 569 00 |
| | | R. B. Hough, salary and expenses, June, Forestry | 250 00 |
| | | R. C. Milne, salary account, balance | 250 00 |
| | | F. L. Underhill, salary, Live Stock | 125 00 |
| | | Ida V. Burch, stenographer | 100 00 |
| | | Jas. J. Donlan, salary and bills paid, Floriculture | 270 20 |
| | | Geo. D. Milligan Co., lettering, etc., State Building | 26 25 |
| | | Henry Dibblee Co., brass cuspidors, State Building | 40 00 |
| | | H. F. Bush, expenses, etc., Elmira Reformatory exhibit | 31 55 |
| | | Hitchcock, Darling & Co., rooms, etc., Education | 25 00 |
| | | Edw. Harrold, carting, etc | 33 75 |
| | | Caldwell Lawn Mower, machine, State Building | 5 00 |
| | | Henry Romeike, press records, April, May and June | 24 42 |
| | | Western Union Telegraph Co., account | 2 65 |
| | | Arthur Hollick, services, etc., Scientific exhibit | 16 00 |
| | | American Express Co., March, April, May and June bills, all exhibits, $181.71, $214.50, $14.60, $286.25 | 697 06 |
| | | Whitall, Tatum & Co., case show bottles, Dairy | 13.25 |
| | | Rand, McNally & Co., box labels | 8 50 |
| | | Western Rubber and Belting Co., mat | 16 80 |
| | | O. L. Hershiser, salary and bills paid, Apiarian | 415 29 |
| | | Mrs. F. R. Jones, bills paid, Colonial exhibit, Women's Board. | 597 32 |
| | 18. | B. J. McCarthy, expense bills, clerk, 5th district | 240 00 |
| | | McArthur Bros., cases in Dairy Building, Dairy exhibit | 1,495 71 |
| | | Creamery Package Manufacturing Co., spruce boxes, Dairy | 65 50 |
| | | Geo. C. Snow, June bills, Viticulture | 266 21 |
| | | Jno. T. Norton, traveling expenses, 3d district | 108 00 |
| | | S. G. Spier, typewriting supplies, etc | 10 75 |
| | | O. L. Warner, freight on statues | 43 84 |
| | | A. H. Revell & Co., furniture and fittings, State Building | 870 79 |
| | | Wakefield Rattan Co., furniture, State Building | 519 30 |
| | | J. S Ford, Johnson & Co., furniture, State Building | 714 50 |
| | | H. R. Van Keuren, collation, naval review, New York | 1,556 00 |
| | | Merle & Heany Manufacturing Co., oak wall case, Education | 100 00 |
| | | Jared Sanford, traveling expenses, etc., Education | 121 50 |

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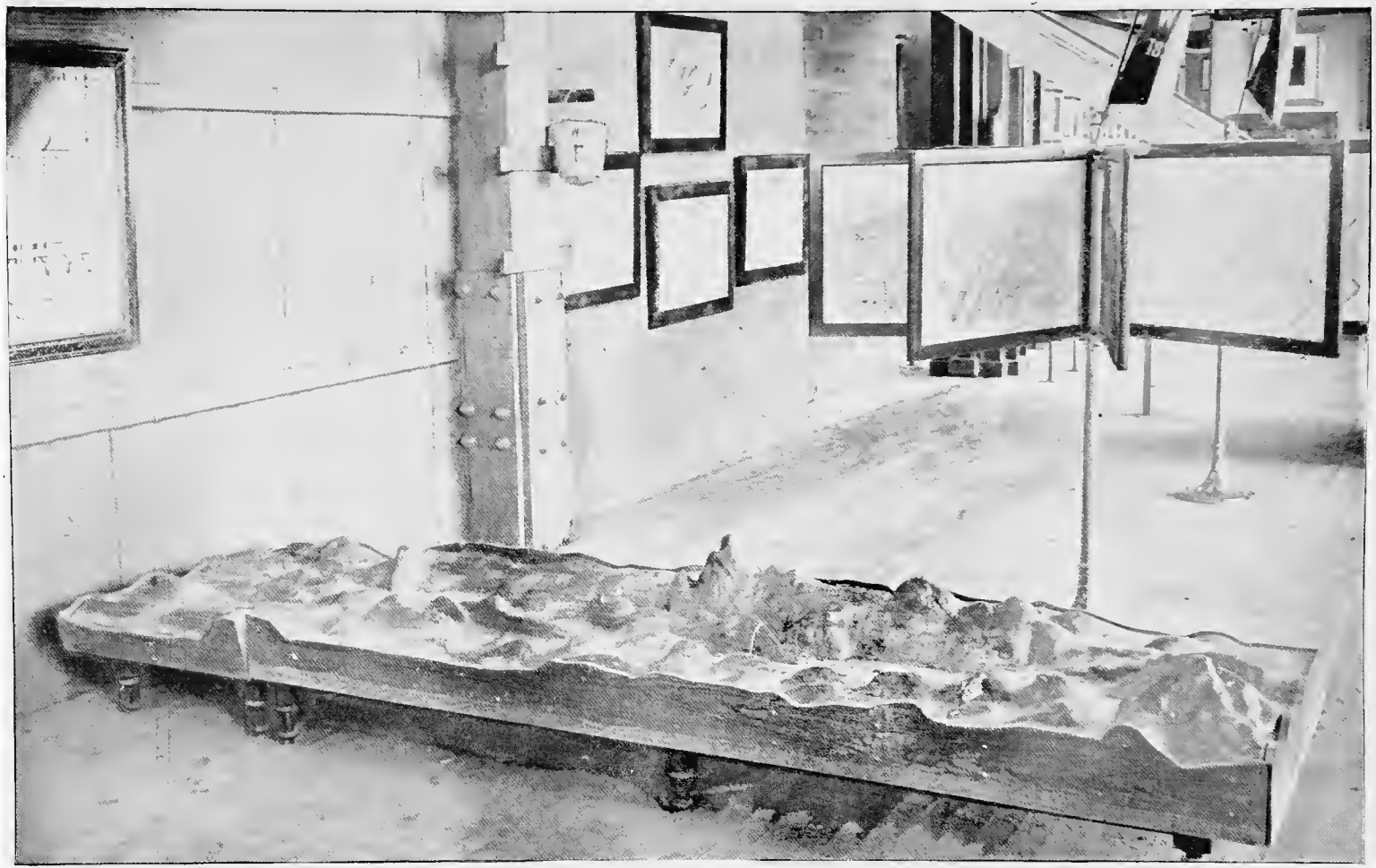
| July | 24. | E. Wegman, Jr., services, $250, and bills paid, in Croton Water exhibit | $704 02 |
| | | The William Phillipson Co., model, Elmira Reformatory | 3,000 00 |
| | | Thos. Wilding, exhibit, Buffalo Hospital, Charities | 153 10 |
| | | Annesley & Co., expenses, Furniture exhibit | 6 68 |
| | | Eastman Kodak Co., enlargements, Education | 16 65 |
| | | Crane Elevator Co., oil, supplies | 14 70 |
| | | Mrs. Leslie Pell-Clarke, traveling expenses, etc., Women's Board | 150 20 |
| | | Western Union Telegraph Co., April account, Women's Board. | 17 07 |
| | | Mary Daly, services, Women's Board | 18 00 |
| | | Margaret Tomes, salary, Women's Board | 125 00 |
| | | Anna I. Jennyss, salary, stenographer, Women's Board | 75 00 |
| | | Mrs. A. M. Dodge, bills, etc., Costumes exhibit, Women's Board | 352 53 |
| | | Mrs. J. S. T. Stranahan, expenses and bills paid, Women's Board | 233 76 |
| | | Florence C. Ives, salary account, $166.66; bills paid, $58.12 | 224 78 |
| | 26. | Acker, Merrill & Condit, supplies, etc., Naval Review | 233 10 |
| | 28. | Schraps & Kahn, subsistence account, State Building | 381 10 |
| | | Tiffany & Co., stationery, State Building | 161 11 |
| | | H. J. Rogers, vouchers of twenty-one bills paid, Education | 1,415 87 |
| | | Gick & Sayles, carpenters, boxes and cases, Scientific | 413 69 |
| | | Lea M. Luquer, services and expenses, Scientific | 201 42 |
| | | A. R. Eastman, butter and cheese, $837 80 and $324.20, Dairy | 1,162 00 |
| | | Emily Huntington, expenses, Créche exhibit, June, Women's Board | 337 59 |
| | | Anna Roosevelt, bills paid, expenses, etc., Women's Board | 117 61 |
| | | World's Columbian Exposition, guard service, two months, Lace exhibit, Women's Board | 185 00 |
| | | A. H. Revell & Co., table, $12, and case, $12.75, Women's Board | 24 75 |
| | | H. Huntsman, showcase, Women's Board | 31 28 |
| | | A. H. Andrews & Co., two wing frame stands, Charities | 130 00 |
| | | Footing to August, 1893 | $434,002 45 |
| Aug. | 2. | D. D. Luther, services and expenses, Scientific | 27 93 |
| | | M. Delehanty's Sons, tin frames (13), Scientific | 13 00 |
| | | Annesley & Co., framing and packing, Scientific | 46 75 |
| | | Hayden Furniture Co., cases and pavilions, Horticulture | 3,886 38 |
| | | Jno. G. Coder, work on arch, etc., Educational | 200 00 |
| | | H. J. Rogers, vouchers seventy bills paid, Education | 2,416 11 |
| | | M. Daly, services, July, Women's Board | 18 00 |
| | | Anna I. Jennyss, stenographer, July, Women's Board | 75 00 |
| | | Florence C. Ives, salary, July, Women's Board | 166 66 |
| | | Margaret Tomes, salary, July, Women's Board | 125 00 |
| | | G. S. Stevens, salary account | 200 00 |
| | | J. F. Craig, salary account | 100 00 |
| | | R. C. Milne, salary account | 100 00 |
| | | P. T. Wall, salary account | 200 00 |
| | 10. | F. J. H. Merrill, traveling expenses and bills paid, Scientific. | 238 76 |
| | | O. L. Hershiser, traveling expenses and bills paid, Apiarian. | 96 30 |
| | | W. T. Falconer Manufacturing Co., 1,000 cases and 32 crates, Apiarian | 291 65 |
| | | H. O. Sheppard Co., priuting cards, etc., Scientific | 116 25 |
| | | Stella Farrand, services, Horticulture | 45 00 |
| | | A. R. Eastman, services and expenses, Dairy | 237 00 |
| | | George B. Gifford, services, electrician, State Building | 125 00 |
| | | D. Mackoff, services, State Building | 150 00 |
| | | E. G. Fowler, services, assistaut, Horticulture | 200 00 |
| | | A. D. Perry, services, assistant, Horticulture | 175 00 |
| | | Bates Manufacturing Co., register | 14 00 |
| | | Mary E. Alger, services, State Building | 100 00 |
| | | Eureka Fire Hose Co., supplies, State Building | 67 50 |
| | | Alfred Fowler, services, Horticulture | 45 00 |



RELIEF MAP OF LAKE GEORGE

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| Aug. | 10. | Rand, McNally & Co., voucher sheets | $8 65 |
| | | J. W. Sanborn, salary, $125, and bills paid, Indian | 305 25 |
| | | T. W. Loftus, services | 100 00 |
| | | G. T. Smith, salary account | 62 50 |
| | | Ida V. Burch, salary | 100 00 |
| | | James J. Donlan, salary and bills, July, Floriculture | 238 50 |
| | | Mrs. Leslie Pell-Clarke, traveling expenses | 112 99 |
| | | L. E. Carpenter, salary, July | 150 00 |
| | | I. De Mallie, Jr., painting and lettering, Scientific | 40 00 |
| | | H. Ries, traveling expenses, Scientific | 31 73 |
| | | Whitall, Tatum & Co., show bottles, Dairy | 12 10 |
| | | M. Field & Co., furnishings, Workingman's Home | 20 53 |
| | | E. J. Sweeney, insurance, six months, Applied Arts, Women's Board | 500 00 |
| | 18. | F. L. Underhill, salary, July, Live Stock | 125 00 |
| | | James Wood, traveling expenses and bills paid | 126 97 |
| | | James Field Co., flags | 44 00 |
| | | A. H. Revell & Co., furniture account, State Building | 95 05 |
| | | F. M. J. Wood, salary, July, $100; railroad expenses, etc., $26.15; Horticulture | 126 15 |
| | | E. Wegman, Jr., bills paid, Croton Water exhibit | 51 15 |
| | | J. W. Sanborn, July salary, $178; Iroquois relic collection, purchased for New York State Museum, $206.53; articles bought for sale (per chap. 497, Laws 1893), $958.89; Indian. | 1,343 42 |
| | | Ward's Natural Science Establishment, packing and setting up mastodon in Chicago, $350; two showcases, $400; Scientific | 750 00 |
| | | Florence C. Ives, bills paid, May, June and July, Women's Board | 179 23 |
| | | Mrs. F. P. Bellamy, bills and salaries paid, Library exhibit, Women's Board | 256 99 |
| | | Mrs. A. M. Dodge, expenses, Crèche exhibit, Women's Board. | 445 00 |
| | | Schraps & Kahn, supplies, Women's Board | 11 70 |
| | | A. J. Parker, receiver, etc., circulars, Women's Board | 6 00 |
| | | Mrs. C. F. Wadsworth, traveling expenses, Women's Board. | 39 91 |
| | | A. R. Eastman, salary and expenses, July, Dairy | 254 35 |
| | | Wells, Fargo & Co., expressage, June exhibit, Dairy | 103 55 |
| | | W. W. Hall, salary and expenses, June and July, Dairy | 483 85 |
| | | M. T. Morgan, salary and expenses, June and July, Dairy | 457 67 |
| | | M. S. Ackler, services, Dairy | 26 00 |
| | | L. C. Ackler, stenographer, salary account, Dairy | 100 00 |
| | | E. S. Munson, services and expenses, two months, Dairy | 259 17 |
| | | Addison Jackson, services aud expenses, two months, Dairy. | 282 88 |
| | | H. M. Wood, services and expenses, soliciting exhibits, Dairy. | 25 42 |
| | | M. R. Wait, services and expenses, soliciting exhibits, Dairy. | 85 60 |
| | | J. S. Shattuck, services and expenses, Dairy | 40 94 |
| | | A. B. Davis, services and expenses, soliciting exhibits, Dairy. | 66 04 |
| | | C. A. McMurdy, 280 butter tubs, etc., $102.70; 500 tubs, etc., $211.29; Dairy | 313 99 |
| | | C. N. White, manager, 116 cases butter jars, Dairy | 69 60 |
| | 19. | G. W. Allen, vice-president, etc., draft on Chicago, on account of requisition No. 4 of $10,000 (see supplementary list of expenditures) | 5,000 00 |
| | 23. | The Henry Dibblee Co., cuspidors, State Building | 40 00 |
| | | Thomas Martin, roof and window awnings, State Building | 926 00 |
| | | F. J. Sarmiento & Co., decorative work, etc., State Building. | 37 10 |
| | | R. J. Horner & Co., reading rooms, equipment, State Building | 685 27 |
| | | Fr. Beck & Co., wall paper, labor, etc., State Building | 939 46 |
| | | The Jerome Paper Co., supplies, State Building | 27 00 |
| | | Alex. Jacobs, glass, Women's Board | 11 50 |
| | | Western Union Telegraph Co., account, May, Women's Board. | 10 88 |
| | | R. B. Hough, salary and expenses, July, Forestry | 250 00 |
| | | T. J. Griffith, flooring and fitting, Transportation | 201 00 |
| | | O. L. Hershiser, salary and bills paid, July, Apiarian | 273 09 |
| | | G. T. Powell, expenses and bills paid, June, Horticulture | 723 44 |

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| Aug. | 23. | James Dean, bills paid, $1,239.72 and $966.70, Floriculture.. | $2,206 42 |
| | | Geo. J. Metzger, model of New York State model poorhouse. | 449 30 |
| | | Alling & Cory, letter paper... | 20 40 |
| | | R. M. Myers & Co., letter paper and office supplies.. | 27 73 |
| | | B. D. Gilbert, services and expenses, Dairy | 46 28 |
| | | The W. H. Burton Co., tables, crating, etc., Women's Board. | 138 92 |
| | | Miss M. M. Love, expenses and salaries, Children's Building, Crèche exhibit, $1,066.74 and $142.81, Women's Board.... | 1,209 55 |
| | | The "Timberman," 10,000 pamphlets, Forestry | 26 00 |
| | | E. G. Ferguson, carpenter, State Building | 166 00 |
| | | J. H. Kintz, livery | 40 00 |
| | | F. E. Dawley, traveling expenses, etc., Poultry exhibit | 17 64 |
| | | Tiffany & Co., invitations, etc., Naval Review | 485 00 |
| | | C. Dorflinger & Sons, glass jars, etc., salt, Scientific | 8 10 |
| | | Mueller Bros., picture frames, etc., Charities | 44 75 |
| | | Schraps & Kahn, supplies, subsistence account, July | 401 45 |
| | | G. C. Snow, expenses and salary account, July, Viticulture. | 203 78 |
| | | American Express Co., express, Albany, July | 91 25 |
| | 31. | G. W. Allen, vice-president, draft on Chicago, balance on requisition No. 4 (see supplementary list of expenditures).. | 5,000 00 |
| | | Footing to September, 1893 | $466,037 93 |
| Sept. | 15. | J. F. Craig, salary account | 100 00 |
| | 16. | Kuhne Beveridge, balance bust De Witt Clinton | 500 00 |
| | 19. | T. W. Loftus, salary account | 100 00 |
| | | F. C. Schraub, traveling expenses, Dairy | 109 77 |
| | 22. | Rand, McNally & Co., cards, etc., printing, Women's Board. | 179 65 |
| | | H. C. Davidson, superintendent Society Decorative Art, State flag, Women's Board | 612 00 |
| | | J. A. Colby & Sons, curtain and pole, Women's Board | 8 50 |
| | | Schraps & Kahn, supplies, Women's Board | 20 00 |
| | | Mrs. J. S. T. Stranahan, expenses and bills paid, Women's Board | 56 32 |
| | | Mrs. F. P. Bellamy, installation, Library exhibit, Women's Board | 168 85 |
| | | Maitland, Armstrong & Co., expressage, etc., Women's Board. | 32 55 |
| | | Miss Anna Roosevelt, expenses and bills paid, Women's Board. | 203 70 |
| | | Mrs. A. M. Dodge, printing bill paid, $108, and bills paid, Day Nursery exhibit, Women's Board | 375 00 |
| | | Hayden Furniture Co., work on cases, Women's Board | 125 00 |
| | | Miss Lucy M. Salmon, expenses and bills, Women's Board... | 321 00 |
| | | M. C. Larrabee, expenses and bills paid, Children's Building, July, Women's Board | 234 63 |
| | | Caroline E. Dennis, bills paid, Nurses' exhibit, Women's Board. | 135 22 |
| | | A. H. Revell & Co , furniture, Women's Board, $6; Forestry exhibit, $9.10; General Board, $44.75 | 59 85 |
| | | I. De Mallie, Jr., lettering and painting | 13 25 |
| | | Hayden Furniture Co., cases for Agricultural exhibit, $61; $61; cases and cabinets for Scientific exhibit, $5,479.65.. | 5,540 65 |
| | | M. F. Pierson, services, expenses and paid bills, in Potato exhibit, two bills, $79 and $278.51, Agriculture | 357 51 |
| | | F. E. Dawley, expenses and services, two bills, making potted cheese, $20.65 and $39.55, Dairy | 60 20 |
| | | F. M. J. Wood, salary, August, Horticulture | 50 00 |
| | | Jas. J. Donlan, salary and expenses paid, August, Floriculture. | 265 67 |
| | | Peter Mawdsley, photographs, Horticultural, $40, and Transportation, $25 | 65 00 |
| | | Kiehly & Stahl, hardware, etc., relief map, Transportation.. | 78 50 |
| | | National Express Co., express, July, Educational | 23 60 |
| | | R. B. Hough, salary and expenses, August. Forestry | 250 00 |
| | | Jno. R. Moynihan, salary, two months, postmaster, State Building | 250 00 |
| | | Geo. B. Gifford, salary, electrician, State Building | 125 00 |
| | | John J. Magee, supplies, State Building | 29 19 |
| | | Chicago Carpet Co., work on carpets, State Buildiug | 37 83 |
| | | Mueller Brothers, picture frames repaired, Charities. | 17 00 |

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| Sept. | 22. | P. T. Wall, salary account | $100 00 |
| | | G. S. Stevens, salary account | 100 00 |
| | | Geo. T. Smith, traveling expenses | 18 50 |
| | | John Foord, expense bill, three months | 454 00 |
| | | John W. Sanborn, salary account, self and employees, August, $306; salary and expenses, bills, etc., Indian exhibit, $286.39; goods bought for sale, Indian exhibit, $305.51 | 897 90 |
| | | Geo. Rumble & Co., pavilions and partitions, four exhibits | 574 68 |
| | | A. B. Davis, services and expenses, soliciting exhibits, Dairy | 26 77 |
| | | C. D. Munsell, printing, Dairy | 25 25 |
| | | Mabel S. Ackler, services, Dairy | 35 00 |
| | | Lincoln C. Ackler, services, August, Dairy | 50 00 |
| | | The Frank Van Doorn Co., shields, banners, etc., "State of New York," for all the State exhibits | 839 19 |
| | | C. F. Schraps, subsistence account, New York State Building, New York Day | 615 50 |
| | | Elko Mining, Milling and Manufacturing Co., paints | 10 00 |
| | | F. L. Underhill, salary account, August, Agriculture | 125 00 |
| | | H. Romeike, press records, July and August | 28 83 |
| | | F. J. H. Merrill, traveling expenses and bills paid, Scientific | 172 85 |
| | | Geo. T. Powell, expenses and bills paid, Horticulture | 227 92 |
| | | M. Field & Co., flags, bunting, etc., State Building | 298 10 |
| | | M. R. Wait, services and expenses, soliciting exhibits, Dairy | 26 07 |
| | | National Express Co., on fruit packages, Horticulture | 7 15 |
| | | American Express Co., Education, $80.75; General, $2.65 | 83 40 |
| | | Z. F. Magill, photographs, Charities | 15 00 |
| | | L. Tucker & Son, advertising, Poultry | 28 50 |
| | | E. S. Sterry, balance, photographs, Scientific aud 3d district | 19 40 |
| | | Annesley & Co., framing portraits, etc | 132 00 |
| | | H. K. Bush-Brown, express and cartage paid, Fine Arts | 282 50 |
| | | Chas. F. Haseltine, express and cartage paid, Fine Arts | 5 75 |
| | | Arch. Rogers, express and cartage paid, Fine Arts | 37 90 |
| | | H. Bolton Jones, stationery, postage, etc., Fine Arts | 13 16 |
| | | R. H. Plumb, packing and expressage, Fine Arts | 23 60 |
| | 25. | W. & J. Sloane, rugs and shades, New York State Building | 341 23 |
| | | A. H. Andrews & Co., wing frame standard, Charities | 88 00 |
| | | C. F. Williams, labels and printing, Scientific | 27 65 |
| | | J. H. A. Walthausen, boxing and packing statue, H. Hudson, | 35 00 |
| | | E. G. Ferguson, carpenter, State Building | 102 40 |
| | | C. M. Lang, oil paintings, State Building | 500 00 |
| | | Addison Jackson, services and expenses, Dairy | 26 02 |
| | | Wm. Schill, collecting and packing oil paintings, Fine Arts | 1,636 40 |
| | | Florence C. Ives, installation bills, Women's Board | 268 93 |
| | | Mrs. C. F. Wadsworth, bills and expenses, Women's Board | 121 21 |
| | | Mrs. Leslie Pell-Clarke, traveling expenses, Women's Board | 10 09 |
| | | Anna I. Jennyss, traveling expenses, Women's Board | 31 25 |
| | 26. | Gorton W. Allen, vice-president, on requsition 6 (see supplementary list of expenditures), draft | 6,000 00 |
| | 29. | J. A. Colby & Sons, mantel and showcases, etc., Women's Board | 131 55 |
| | | Hayden Furniture Co., showcase and freight, $167.50; wing frames and expressage, $293.73; Women's Board | 461 27 |
| | | Flanagan & Biedenweg, packing, etc., Women's Board | 28 50 |
| | | Miss Anna Roosevelt, printing of pamphlets, Women's Board | 159 00 |
| | | Rand, McNally & Co., office stationery, Women's Board | 6 40 |
| | | Mrs. F. P. Bellamy, printing and clerical bills, Women's Board | 295 47 |
| | | Theo. Gunsel, State flag | 25 00 |
| | | Citizen Publishing Co., printing and supplies, Dairy | 11 25 |
| | | Geo. A. Smith, butter for exhibit, Dairy | 636 25 |
| | | Geo. A. Smith, cheese for exhibit, Dairy | 1,208 80 |
| | | F. E. Dawley, services and expenses, Cheese exhibit, Dairy | 35 22 |
| | | Geo C. Snow, expenses and salary, August, Viticulture | 263 64 |
| | | Pain's Fireworks Co., special illumination, New York Day | 1,000 00 |
| | | O. L. Hershiser, expenses and salary, August, Apiarian | 266 99 |

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| Sept. | 29. | William B. Tuthill, bills for clerk hire to May 20, Fine Arts.. | $954 65 |
| | | M. F. Pierson, stock bought, Potato exhibit..... | 512 86 |
| | 30. | Gorton W. Allen, vice-president, balance on requisition No. 6, draft (see list of supplementary expenditures)..... ..... | 4,000 00 |
| | | Footing to October, 1893..... ..... ..... | $506,002 32 |
| Oct. | 3. | C. R. Schraps, successor Schraps & Kahn, subsistence account of $205.65 and $617.55, July and August, State Building... | 820 20 |
| | | E. S. Munson, services and expenses, soliciting, Dairy..... | 60 71 |
| | | A. H. Andrews & Co., balance on copper railing, Forestry... | 41 75 |
| | | R. C. Fisher & Co., freight on marble, expense of skilled workmen, putting up mantels loaned, State Building..... | 556 51 |
| | | W. Scott Thurber, framing pictures, Niagara Falls, State Building..... ..... | 211 50 |
| | | Post-Express Printing Co., printing, stationery..... | 19 50 |
| | | James F. Craig, salary ..... ..... | 100 00 |
| | | Geo. S. Stevens, salary account..... | 200 00 |
| | | P. T. Wall, salary account ..... ..... | 200 00 |
| | | B. D. Gilbert, services and expenses, Dairy..... | 47 80 |
| | | Henry Koons, traveling expenses, 8th district..... ..... | 57 46 |
| | 7. | New York Central and Hudson River R. R. Co., train service. | 978 00 |
| | 13. | Gorton W. Allen, vice-president, draft on Chicago on requisition No. 6 (see list of supplementary expenditures)..... | 10,000 00 |
| | 20. | J. W. Sanborn, salary account and goods bought, Indian.... | 1,066 36 |
| | | Jas. B. Van Duzee, storing and packing furniture, 8th district. | 26 09 |
| | | National Express Co., for Horticulture exhibit, $11.05; Educational exhibit, $1.80..... | 12 85 |
| | | Wells, Fargo & Co., transporting butter, etc., July, Dairy... | 146 65 |
| | | F. L. Underhill, salary account, September, Live Stock ..... | 125 00 |
| | | James Wood, traveling expenses and bills paid, Live Stock.. | 117 20 |
| | | Romeyn B. Hough, salary and expenses, September, Forestry. | 250 00 |
| | | A. C. McClurg & Co., invitations and programs, State Building..... | 48 00 |
| | | Geo. B. Gifford, salary, September, electrician, State Building. | 100 00 |
| | | Fraser & Kelly, carting and freight, Scientific ..... | 63 27 |
| | | Chas. R. Yandell & Co., insurance and freights, leather screens, loaned, State Building..... ..... | 230 05 |
| | | Mary H. Barrell, stenographer, April, May and June accounts. | 162 50 |
| | | F. M. J. Wood, clerk, salary, September, Horticulture..... | 50 00 |
| | | T. G. Newman, supplies, jars, cans, etc., Apiarian..... | 65 02 |
| | | Chicago Times, special edition, supplement, etc., New York Day..... | 550 00 |
| | | Jas. W. Tappin, traveling expenses, 1st district..... | 35 35 |
| | | Florence C. Ives, expense bills paid, Woman's Board..... | 77 49 |
| | | A. M. Starkweather, bills paid, Women's Board..... | 19 23 |
| | | Mrs. F. P. Bellamy, books bought, library, Women's Board . | 76 62 |
| | | C. R. Schraps, board of help, Women's Board..... | 20 00 |
| | | Mrs. A. M. Dodge, salaries and bills paid, Nursery exhibit, August, Women's Board ..... ..... | 344 00 |
| | | Jas. J. Donlan, salary, labor and expense account, September, Floriculture..... ..... | 259 30 |
| | | M. F. Pierson, salary, labor and expense account, Potato exhibit..... ..... | 466 65 |
| | | American Express Co., Education, $35.35; General, $45.05... | 80 40 |
| | | Jas. B. Lyon, printing pamphlets, Education..... | 300 00 |
| | | Myron A. Cooney, services, Education..... | 150 00 |
| | | Wm. H. Gilbert, traveling expenses, $19.79; salary account, five months, $450; Dairy..... | 469 79 |
| | | L. C. Ackler, services, September, Dairy ..... | 50 00 |
| | | A. B. Davis, services and expenses, soliciting, Dairy..... | 34 13 |
| | | Mabel S. Ackler, services, Dairy ..... | 25 00 |
| | 25. | George C. Snow, salary and expenses, September, Viticulture. | 203 06 |
| | | F. Schilling, services and traveling expenses, $114.65; cubes and cut stones, $36.25; Scientific ..... | 150 90 |
| | | O. L. Hershiser, salary and expenses, September, Apiarian.. | 286 79 |
| | | W. H. Williams & Son, badges account..... | 54 00 |

ENGLISH GOVERNMENT BUILDING, Victoria House

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| Oct. | 25 | Henry Seibert, traveling expenses, 2d district | | $58 00 |
| | | Adams & Hodgman, livery account, 4th district | | 21 00 |
| | | George A. Smith, butter and cheese for October exhibit, Dairy (to be sold per chap. 497, Laws 1893) | | 1,624 90 |
| | 31. | M. R. Wait, services and expenses, soliciting exhibits, Dairy. | | 33 75 |
| | | George A. Smith, salary, October 26, Dairy | | 173 33 |
| | | M. T. Morgan, salary, October 26, Dairy | | 173 33 |
| | | The Argus Co., printing and stationery, Women's Board | | 78 80 |
| | | Smith, Crimp & Eastman, decorations, Woman's Building, Women's Board | | 450 00 |
| | | Mrs. A. M. Dodge, salaries and expenses for September, Nursery exhibit, Women's Board | | 304 00 |
| | | L. G. Runkle, services, literary work, Women's Board | | 150 00 |
| | | Miss Anna Roosevelt, expenses and bills, Women's Board | | 198 67 |
| | | John W. Sanborn, goods bought for sale, Indian | | 824 53 |
| | | Wm. P. Herdlein, labor, freight and express paid, Apiarian. | | 113 77 |
| | | Stecker Lithograph Co., picture Willard Asylum, Charities | | 450 00 |
| | | Footing to November, 1893 | | $530,065 53 |
| Nov. | 3. | Gorton W. Allen, vice-president, draft on Chicago for requisition No. 7 (see supplementary list of expenditures) | | 10,000 00 |
| | 20. | F. L. Underhill, salary, October, Live Stock | | 125 00 |
| | | George C. Snow, expenses and salary, October, Viticulture | | 182 45 |
| | | Buffalo Storage and Carting Co., freight and storage, Apiarian. | | 34 12 |
| | | James Dean, traveling expenses and bills paid, Floriculture | | 242 44 |
| | | Ida V. Burch, stenographer, salary account | | 100 00 |
| | | R. B. Hough, salary and expenses, October, Forestry | | 250 00 |
| | | H. J. Menzie, administrator, estate D. McNaughton, balance of salary due, bills paid | | 999 67 |
| | | James B. Lyon, register and printing, State Building | | 107 00 |
| | | A. C. McClurg & Co., stationery and supplies | | 532 14 |
| | | M. F. Pierson, salary and bills, Potato exhibit, Agriculture | | 300 70 |
| | | Mrs. Leslie Pell-Clarke, installation expenses, Women's Board. | | 9 45 |
| | | H. J. Rogers, thirty-one bills paid, preparation of exhibit, Education | $1,030 50 | |
| | | H. J. Rogers, fifty-five bills paid, preparation of exhibit, Education | 1,909 38 | |
| | | | | 2,939 88 |
| | 28. | Florence C. Ives, bills paid, Women's Board | | 629 37 |
| | | Emily Huntington, supplies bought, Women's Board | | 40 50 |
| | | American Express Co., returning exhibits, Women's Board | | 419 25 |
| | | World's Columbian Exposition, wiring for 1,789 incandescent lights, service for season on 1,168 lights, wiring for twelve horse power motor, service for motor (elevator) May to November first, New York State Building | | 13,049 92 |
| | | Footing to December, 1893 | | $560,027 42 |
| Dec. | 8. | Mrs. Candace Wheeler, traveling expenses, Women's Board | | 62 90 |
| | | Mrs. C. F. Wadsworth, traveling expenses, Women's Board. | | 116 29 |
| | | Margaret Tomes, salary account, Women's Board | | 125 00 |
| | 16. | H. J. Rogers, salary account and bills paid, Education | | 150 88 |
| | 18. | Rand, McNally & Co., office supplies, paper, etc | | 102 30 |
| | | Ida V. Burch, salary account | | 100 00 |
| | | H. Romeike, press records, three months | | 57 81 |
| | | Chicago Times, advertising | | 3 00 |
| | | Chicago Herald Co., advertising | | 8 75 |
| | | A. D. Perry, bills paid, Horticulture | | 9 33 |
| | | Geo. T. Powell, bills and expenses, Horticulture | | 181 05 |
| | | F. M. J. Wood, salary, Horticulture | | 50 00 |
| | | H. Ries, services and traveling expenses, Scientific | | 103 12 |
| | | T. W. Gray, coal account, State Building | | 191 50 |
| | | J. J. Magee, supplies, State Building | | 20 32 |
| | | Cheatle & Bowley, oil account, State Building | | 29 30 |
| | | Hugh Duffy, traveling expenses, 6th district | | 84 07 |
| | | J. F. Humphrey, salary, 6th district | | 10 00 |
| | | Hez. Bowen, salary and bills paid, Agriculture | | 182 59 |

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| Dec. | 18. | John E. Didama, salary and bills paid, Agriculture | $98 35 |
| | 19. | James J. Donlan, salary and bills paid, Floriculture | 238 47 |
| | | Citizen Publishing Co., printing, Dairy | 6 00 |
| | | C. A. McMurdy, services and expenses, Dairy | 8 96 |
| | | Childs & Jones, expressage, etc., Dairy | 9 80 |
| | | C. D. Munsell, stationery and printing, Dairy | 38 25 |
| | | John E. Lewis, expressage, Dairy | 4 20 |
| | | Mabel S. Ackler, services, Dairy | 16 00 |
| | | L. C. Ackler, salary, Dairy | 50 00 |
| | | F. L. Underhill, salary, Agriculture | 125 00 |
| | | C. H. Rice, hardware supplies, State Building | 57 95 |
| | | A. D. Cronk & Co., agents, car hire, Live Stock | 225 00 |
| | | G. D. Butler, Western Union Telegraph Co., account | 8 01 |
| | | A. L. Hough, services, $435; expenses, $285.41; Forestry | 720 41 |
| | | R. B. Hough, expenses, $25.69; expenses, $557.14; Forestry | 582 83 |
| | | John Foord, expenses, etc. | 136 00 |
| | | Fraser & Kelly, freight paid, cartage, etc., various exhibits | 467 47 |
| | | Wm. J. Loftus, traveling expenses, State Building | 26 65 |
| | | C. R. Yandell & Co., freight, etc., screens, State Building | 60 50 |
| | | R. C. Fisher & Co., freight, etc., marble work, State Building | 317 84 |
| | | National Express Co., express, Poultry | 17 50 |
| | | Geo. F. O'Neil, traveling expenses, 6th district | 104 99 |
| | | Associated Express Cos., Chicago, express, Fine Arts | 217 95 |
| | | T. F. Romeyn, boxes, Scientific | 44 39 |
| | | Geo. C. Snow, salary, expenses, bills, Viticulture | 136 98 |
| | | Footing to January, 1894 | $565,335 13 |
| 1894. | | | |
| Jan | 3. | W. I. Buchanan, chief agent, forage, etc., Live Stock | 122 50 |
| | | Jno. H. Reynolds, salary account | 200 00 |
| | | Jas. F. Craig, salary and bill paid | 105 50 |
| | | Ida V. Burch, salary | 100 00 |
| | | Geo. S. Stevens, salary | 100 00 |
| | | Jno. Foord, salary | 250 00 |
| | | Jno. R. Moynihan, salary | 100 00 |
| | | H. J. Rogers, salary and bills paid, Education | 196 85 |
| | 22. | R. H. Thurston, traveling expenses, 5th district | 5 45 |
| | | S. B. Van Ness, traveling expenses | 14 01 |
| | | Geo. B. Sloan, traveling expenses, 5th district | 87 68 |
| | | W. L. Sessions, traveling expenses | 27 12 |
| | | L. C. Ackler, salary account, Dairy | 50 00 |
| | | Mabel S. Ackler, services, Dairy | 20 00 |
| | | Geo. Moss, office rent, 7th district | 200 00 |
| | | R. B. Hough, services, etc., nine months, Forestry | 1,500 00 |
| | | John Foley, salary account | 416 67 |
| | | John H. Reynolds, salary account | 100 00 |
| | | J. W. Sanborn, salary, expenses and bills paid, Indian | 582 03 |
| | | Anna M. Parks, stenographer | 99 50 |
| | | Duparquet, Huot & Co., kitchen utensils, State Building | 80 00 |
| | | C. F. McKim, use of vases, roof garden, State Building | 750 00 |
| | | T. W. Loftus, traveling expenses, State Building | 37 15 |
| | 30. | John Foord, traveling expenses, General | 29 00 |
| | | Fraser & Kelly, freight paid, carting, etc., exhibits returned | 703 40 |
| | | C. Van Benthuysen & Sons, printing labels, cards, etc., Scientific | 299 65 |
| | | A. H. Revell & Co., furniture, etc., State Building | 64 10 |
| | | Lockhart Moulding Co., frames, etc., Forestry | 439 38 |
| | | Chas. Frost, carpenter, crating exhibits for return | 208 85 |
| | | W. & J. Sloane, carpet account, State Building | 409 60 |
| | | F. Beck & Co., wall papering, etc., State Building | 200 10 |
| | | C. N. White, jars, Dairy | 60 00 |
| | | Union and Advertiser Co., office stationery | 19 25 |
| | | F. A. Ward, packing relief maps | 228 00 |
| | | F. A. Ward, packing mastodon mammals, etc., Scientific | 350 00 |
| | | James Dean, freight, etc., bills paid, Floriculture | 362 12 |
| | | American Express Co | 80 10 |

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| Jan. | 30. | A. J. W. Copelin, photographs of all exhibits | $297 00 |
| | | Chicago Telephone Co., service for season | 101 06 |
| Feb. | 6. | John Foord, salary account | 250 00 |
| | 8. | Josiah Shull, expenses and bills paid, seven months, Dairy | 234 98 |
| | | John H. Reynolds, salary account | 100 00 |
| | | Geo. S. Stevens, salary account | 200 00 |
| | | Geo. C. Snow, bills paid, Viticulture | 18 70 |
| | | The Argus Co., printing and supplies | 82 35 |
| | | W. N. Kernan, traveling expense account, 5th district | 95 00 |
| | | Jas. F. Craig, salary account | 100 00 |
| | | Rand, McNally & Co., printing | 5 00 |
| | | C. F. Williams, printing, Scientific | 17 60 |
| | | G. Brady & Co., mason work | 13 00 |
| | 9. | F. L. Underhill, salary account, Agriculture | 125 00 |
| | | L. M. Howland, traveling expenses and bills paid | 63 56 |
| | | Ida V. Burch, stenographer, salary account | 100 00 |
| | | H. J. Rogers, salary account and bills paid, Education | 187 00 |
| | | Wm. Schill, labor, etc., delivery paintings, Fine Arts | 874 80 |
| | | New York Central and Hudson River R. R. Co., freights, transporting paintings from Chicago, Fine Arts | 447 68 |
| | | American Express Co., transporting paintings to Chicago for exhibition, Fine Arts | 1,034 95 |
| | 13. | Wells, Fargo & Co., transporting paintings to Chicago for exhibition, Fine Arts | 2,238 95 |
| | 16. | New York Central and Hudson River Railroad, transporting paintings from Chicago, Fine Arts | 30 00 |
| | 19. | John Foord, salary account | 125 00 |
| | | B. J. Mullen, traveling expenses and stock bought, Forestry | 49 96 |
| March | 2. | H. J. Menzie, adm. estate D. McNaughton, disbursements, bills paid, etc., vouchers, etc | 617 91 |
| | | John Foord, traveling expenses, etc | 28 00 |
| | | John Foley, salary account, January | 416 67 |
| | | Geo. S. Stevens, salary account | 200 00 |
| | | H. C. Ives, expressage paid, Fine Arts | 85 00 |
| | | John H. Reynolds, salary account and traveling expenses | 128 56 |
| | | Ida V. Burch, stenographer, salary account | 100 00 |
| | | Jas. F. Craig, salary account | 100 00 |
| | 8. | A. H. Revell & Co., furniture, State Building | 24 70 |
| | | C. N. White, manager, jars, Dairy | 12 00 |
| | | John Foley, salary account, February | 416 67 |
| | | H. J. Rogers, salary account | 175 70 |
| | | A. V. Pancoast and A. F. Enos, receivers, by Archer & Pancoast, electric light fixtures, etc., State Building | 1,753 10 |
| | 27. | Duveen Brothers, furniture and tapestry, State Building | 1,099 29 |
| | | Herter Brothers, wall hangings, etc., State Building | 2,838 25 |
| | | Fraser & Kelly, freight and cartage | 47 70 |
| | | W. J. Smith, State flag | 53 00 |
| | | Annesley & Co., picture frames, etc | 146 00 |
| | | P. T. Wall, bill paid | 2 00 |
| | | John Williams, balcony railings, State Building | 93 50 |
| | | C. D. Arnold, photographs | 18 50 |
| | | Heinrich Ries, traveling expenses, Scientific | 7 65 |
| | | W. L. Sessions, traveling expenses | 30 19 |
| | | Olin L. Warner, statues account in full | 1,300 00 |
| | 29. | Mary H. Barrell, balance account, stenographer | 83 33 |
| | | Felix Weil, packing pictures, Fine Arts | 12 00 |
| | | Wm. B. Tuthill, office expenses, three months, Fine Arts | 418 13 |
| | | John H. Reynolds, salary account | 200 00 |
| | | Geo. S. Stevens, salary account | 200 00 |
| | | H. J. Rogers, salary account and bills paid | 192 95 |
| | | Jas. F. Craig, salary account | 100 00 |
| | | Ida V. Burch, salary account | 100 00 |
| April | 13. | American Express Co | 5 89 |
| | | R. B. Hough, gavel made of native woods of State | 20 00 |
| | | J. H Kintz, livery account | 23 00 |
| | | John Foley, salary account | 416 67 |

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| April | 13. | John H. Reynolds, salary account | $100 00 |
| | 20. | James Wood, bills paid, Agriculture | 28 20 |
| | | J. S. Ford, Johnson & Co., rent chairs, State Building | 25 00 |
| | | T. W. Loftus, services, State Building | 100 00 |
| May | 15. | Jno. H. Reynolds, salary account, traveling expenses, bills paid | 143 86 |
| | | H. J. Rogers, salary account, postage paid, etc. | 177 00 |
| | | Geo. S. Stevens, salary account, bills paid etc. | 208 62 |
| | | Jas. F. Craig, salary account | 100 00 |
| | | Ida V. Burch, salary account | 100 00 |
| | 29. | H. J. Menzie, administrator estate D. McNaughton, expense account of $72.50; bills paid in various exhibits, $123 | 195 50 |
| | | H. J. Rogers, salary account and bills paid | 178 00 |
| | | G. S. Stevens, salary account and bills paid | 204 85 |
| | | Pach Brothers, photographs | 50 00 |
| | | Ida V. Burch, salary account | 100 00 |
| | | J. F. Craig, salary account | 100 00 |
| | | L. M. Howland, traveling expenses | 45 54 |
| | | Jno. H. Reynolds, salary account and traveling expenses | 219 15 |
| | | American District Telegraph Co., service bills, 1st district commission | 75 00 |
| | | Fraser & Kelly, cartage and freighting | 48 49 |
| | | Mary E. Alger, traveling expense account | 28 00 |
| | | C. H. Koster, decorations, 1st district | 60 00 |
| | | H. Romeike, press records | 9 62 |
| June | 19. | E. W. Vine, rent typewriter, Charities | 21 00 |
| | | Tiffany & Co., printing | 11 88 |
| | | Hayden Furniture Co., wing frames, Education | 183 00 |
| | | R. C. Milne, expense account | 70 96 |
| | | Geo. C. Snow, expense account, traveling, etc., Viticulture | 13 85 |
| | | Wm. Schill, delivering paintings, etc., Fine Arts | 1,008 67 |
| | | W. L. Sessions, traveling expenses | 39 47 |
| | 27. | G. W. Allen, traveling expenses, four meetings | 72 45 |
| | | E. Baggott, stores and supplies account, State Building | 133 00 |
| | | H. J. Rogers, salary account and bills paid | 181 81 |
| | | G. S. Stevens, salary account | 200 00 |
| | | Jas. F. Craig, salary account | 100 00 |
| | | Jno. W. Sanborn, subsistence and salary account, Indian | 377 92 |
| | | Jno. H. Reynolds, salary, traveling expenses and bills | 233 11 |
| | | W. L. Sessions, traveling expenses | 40 55 |
| | | | $597,512 05 |

## SUPPLEMENTARY LIST OF EXPENDITURES.

VOUCHERS PAID FROM REQUISITION FUND ($70,000), TOTALS OF WHICH ARE INCLUDED IN THE FOREGOING LIST OF EXPENDITURES.

| | | | |
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| 1893. | | | |
| May | 6. | H. J. Rogers, bills paid, installation exhibit, Education | $250 70 |
| | 19. | H. J. Rogers, expenses and salary account, Education | 309 37 |
| | | G. R. Barnes, labor, cleaning, etc., State Building | 102 00 |
| | 20. | Florence C. Ives, bills paid, installing exhibit, Women's Board | 103 38 |
| | | Florence C. Ives, bills paid, installing exhibit, Women's Board | 252 56 |
| | | G. W. Allen, traveling and expense account, September, 1892, to May 19, 1893 | 283 98 |
| | | L. M. Howland, expenses and bills paid, General Board and State Building | 369 72 |
| | | R. C. Milne, traveling expenses | 42 60 |
| | 22. | Chas. M. Kurtz, bills paid, printing, etc., Fine Arts | 9 75 |
| | | National Express Co., April 2–12, work, Scientific | 29 70 |

GERMAN GOVERNMENT BUILDING

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| May | 22. | Mrs. C. F. Wadsworth, expenses, Women's Board | $197 66 |
| | | John H. Reynolds, traveling expenses | 30 50 |
| | | O. L. Hershiser, salary and expenses, April 3–30, Apiarian | 267 39 |
| | | Exhibit Cabinet Co., showcase and freight, Viticulture | 48 85 |
| | | G. C. Snow, salary, bills paid and installation expenses, April, Viticulture | 222 54 |
| | | John W. Sanborn, stock of goods bought for sale, Indian | 516 26 |
| | 23. | Crane Co., railing, Women's Building, Women's Board | 24 85 |
| | | Sypher & Co., packing ten boxes, furniture and expressage, Women's Board | 100 00 |
| | | L. M. Howland, bills paid, State Building | 136 40 |
| | 25. | L. M. Howland, labor bills paid, State Building | 139 25 |
| | 27. | A. M. Parks, stenographer, salary and expenses | 66 50 |
| | | J. H. Rooney, work on locks and keys, State Building | 40 95 |
| | | Bernard Sues, furniture, etc., State Building | 98 33 |
| | | H. J. Rogers, bills paid on exhibit work, Education | 657 53 |
| | | Ida V. Burch, stenographer, traveling expenses | 27 75 |
| | 31. | Juliet M. Preston, stenographer, May 1–27 | 64 00 |
| | | A. G. Mack, traveling expenses, State Building | 40 33 |
| | | Kittie Monroe, salary and traveling expenses | 74 00 |
| June | 3. | H. J. Rogers, labor and expense bills, salary account, etc., Education | 784 86 |
| | | Katharine B. Davis, labor and expense bills, Model Home | 57 78 |
| | | Annie Moneypenny, labor and material, Model Home | 18 62 |
| | | Mrs. O. B. Davis, labor and material, Model Home | 53 15 |
| | | Female Employment Society, labor and material, Model Home | 24 99 |
| | | Fannie Hobbs, labor and material, Model Home | 57 06 |
| | | E. M. Purcell, labor and material, Model Home | 8 35 |
| | | G. S. Stevens, traveling expenses and bills | 59 74 |
| | | John Foord, salary account | 250 00 |
| | | L. M. Howland, bills paid, State Building | 269 89 |
| | | R. B. McNaughton, salary, $37.50, and expenses and supplies, Transportation | 59 90 |
| | | Jas. R. Campbell, salary, $37.50, and expenses and supplies | 57 55 |
| | | F. O. Armstrong, watchman, salary, State Building | 60 00 |
| | 5. | Jno. H. Reynolds, salary account | 200 00 |
| | 9. | Caroline E. Dennis, expenses and bills, Women's Board | 110 19 |
| | | Donald McNaughton, salary account | 416 67 |
| | | L. A. Gardiner, stenographer | 3 00 |
| | 8. | Kath. B. Davis, salary account to June 1, Workingman's Home | 187 50 |
| | | E. H. Dow & Co., hose, sprinklers, etc., State Building | 52 50 |
| | | H. Bowen, salary, expenses and bills, May, Agriculture | 158 99 |
| | | J. E. Didama, salary account, May, Agriculture | 100 25 |
| | | Wells, Fargo & Co., expressage, Dairy | 112 40 |
| | 10. | Florence C. Ives, expenses and bills paid, May, Women's Board | 130 07 |
| | | Geo. Hayward, watchman, traveling expenses, State Building | 19 63 |
| | | F. H. Elter, watchman services, State Building | 28 00 |
| | | David Mackoff, traveling expenses, State Building | 31 00 |
| | | Mrs. Leslie Pell-Clarke, traveling expenses, Women's Board | 161 40 |
| | | A. H. Revell & Co., furniture, etc., Women's Board | 47 50 |
| | | Widdicomb Mantel Co., hearth, Women's Board | 10 00 |
| | | J. A. Colby & Sons, cases and installation work, Women's Board | 68 84 |
| | | Anna I. Jennyss, stenographer, salary, etc., Women's Board | 50 00 |
| | | Florence C. Ives, salary account, and bills, Women's Board | 204 39 |
| | | O. E. Morton, liquidator, etc., insurance, Women's Board | 16 00 |
| | | Margaret Tomes, salary, Women's Board | 125 00 |
| | | Jas. C. Stout, showcases, labor and freights, Women's Board | 252 91 |
| | | Mary E. Scully, stenographer, Charities | 54 00 |
| | | Donald McNaughton, cheese and butter bills of J. S. Martin & Co., Dairy | 673 05 |
| | | The Jerome Paper Co., supplies, State Building | 27 00 |
| | | J. W. Sanborn, salary and expenses, May, Indian | 151 50 |
| | | Carnell & Gutchess, writing cards, Agriculture | 39 37 |

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| June | 10. | Mrs. W. J. Averell, postage account, Women's Board | $5 34 |
| | | Howard J. Rogers, installation expenses, Education | 126 89 |
| | 12. | L. M. Howland, traveling expenses and bills paid, General and State Building | 145 05 |
| | | Geo. S. Stevens, bills paid, General and State Building | 22 82 |
| | | Footing | $10,000 00 |
| | | M. M. Love, expenses, Women's Board | 96 00 |
| | 13. | Ida V. Burch, salary and expenses | 93 30 |
| | 14. | L. M. Howland, bills paid, State Building | 233 16 |
| | | J. M. Preston, stenographer | 32 00 |
| | | George T. Smith, traveling expenses | 20 00 |
| | 15. | Annan Bros. (per Bowen), ceiling work, Agriculture | 55 00 |
| | | H. J. Rogers, installation bills paid and salary account, Education | 199 63 |
| | 17. | H. A. Ward, installation, New York State relief map | 41 25 |
| | | John Allison, labor account, State Building | 77 00 |
| | | R. C. Milne, salary account | 100 00 |
| | | Mary E. Alger, salary account, State Building | 41 66 |
| | | Kittie Monroe, services, Women's Board | 28 08 |
| | | E. E. Bausch & Son, glass, Agriculture | 3 50 |
| | | Caroline E. Dennis, expenses, Women's Board | 177 00 |
| | | George Lauterer, badges, State Building | 10 08 |
| | | George B. Gifford, electrician, traveling expenses, State Building | 23 62 |
| | | James H. McNab, labor, Charities | 27 20 |
| | | L. M. Howland, bills paid, State Building | 130 11 |
| | | A. G. Mack, salary account, State Building | 100 00 |
| | 21. | G. W. Allen, traveling and subsistence account | 154 07 |
| | 22. | Florence C. Ives, expenses and bills, Women's Board | 91 40 |
| | | J. H. McNab, labor, Charities | 9 60 |
| | | John R. Moynihan, salary and traveling expenses, State Building | 128 00 |
| | | W. W. Wellman, lettering cases, Dairy | 10 00 |
| | | George T. Smith, salary account | 45 00 |
| | | O. R. McKenzie, salary account, Charities | 40 00 |
| | | J. Imogen Howard, traveling expenses and bills paid, Women's Board | 144 28 |
| | | Frances Todd Patterson, bills paid, Women's Board | 10 56 |
| | | Emily Huntington, bills paid, Women's Board | 266 18 |
| | 23. | H. J. Rogers, bills paid, expenses, etc., Education | 128 25 |
| | | American Express Co., June butter expressage, Dairy | 244 04 |
| | | Wells, Fargo & Co., June cheese expressage, Dairy | 27 00 |
| | | George B. Carpenter & Co., flag staff, etc., State Building | 9 65 |
| | | Geo. A. Damens, two large signs, Workingman's Home | 60 00 |
| | | James P. Dalton, housekeeping wares, Workingman's Home. | 37 80 |
| | | Chicago Fire Place Co., portable fire bucket, Workingman's Home | 9 00 |
| | | French & Potter Co., crockery, Workingman's Home | 32 55 |
| | | P. T. Wall, traveling expenses | 39 70 |
| | 27. | John H. Reynolds, traveling expenses | 71 03 |
| | 28. | Kath. B. Davis, expenses, labor, supplies, etc., June 1-23, Workingman's Home | 190 82 |
| | 29. | R. C. Milne, salary account | 100 00 |
| | 30. | S. B. Van Ness, salary account, April and May | 130 00 |
| | | Jas. R. Campbell, salary account, June | 65 00 |
| | | F. O. Armstrong, watchman, June, State Building | 60 00 |
| | | Iowa State Band, services, Brooklyn Day | 100 00 |
| | | J. M. Preston, stenographer | 48 00 |
| | | National Hotel Check Co., baggage checks, State Building | 10 00 |
| | | John H. Reynolds, salary account | 200 00 |
| July | 1. | John Foord, salary account | 250 00 |
| | 3. | Harriet L. Husted, salary account, Forestry | 40 00 |
| | | Chicago Directory Co., city directory | 7 50 |
| | | Mary E. Alger, services, State Building | 25 00 |
| | | Geo. Hayward, watchman, June, State Building | 52 00 |

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| July | 3. | John L. Buckley, traveling expenses, State Building | $26 80 |
| | | Geo. B. Gifford, electrician, salary, State Building | 125 00 |
| | | R. B. McNaughton, salary account, Transportation | 70 00 |
| | | Kittie Monroe, salary account, Scientific | 81 00 |
| | | L. E. Carpenter, traveling expenses and salary | 101 59 |
| | | E. H. Dow & Co., plumbing contract, State Building | 420 11 |
| | | Footing | $15,149 52 |
| | 7. | John W. Sanborn, salary and expense account, Indian | 169 53 |
| | | F. H. Elter, salary and expense account | 70 00 |
| | | O. R. McKenzie, salary account, Charities | 40 00 |
| | | Geo. T. Smith, salary account | 80 00 |
| | | J. L. Whitlock, insurance on Sypher & Co., furniture, State Building | 120 00 |
| | | E. R. Meeker, charter, steam launch | 25 00 |
| | 8. | David Mackoff, salary account, State Building | 100 00 |
| | 10. | A. G. Mack, salary account, State Building | 113 33 |
| | | James Wood, traveling expenses and bills paid, Agriculture and Live Stock | 60 10 |
| | | Scrantom, Wetmore & Co., office stationery | 13 58 |
| | | National Express Co., account, June | 3 45 |
| | | A. H. Revell & Co., furniture, Workingman's Home | 7 20 |
| | | The Boynton Furnace Co., repairs, etc., State Building | 9 40 |
| | | Richard Reed, services and expenses, Dairy | 9 06 |
| | 11. | L. M. Howland, bills paid and express | 300 00 |
| | | L. M. Howland, transportation and subsistence account | 215 62 |
| | | J. W. Sanborn, supplies and furnishings, Indian | 145 88 |
| | 13. | L. M. Howland, bills paid, General Board, $39.51; State Building, $260.49 | 300 00 |
| | | Jno. R. Moynihan, salary account, State Building | 150 00 |
| | 14. | W. L. Sessions, traveling expenses | 74 02 |
| | | H. J. Rogers, eight bills, installation, Education | 298 77 |
| | | H. Ries, salary account, Scientific | 125 00 |
| | | Wm. Donnelly, Jr., traveling expenses and salary, Apiarian | 52 05 |
| | 15. | John Allison, labor, State Building | 60 00 |
| | | John E. Didama, salary account, Agriculture | 100 25 |
| | | Juliet M. Preston, stenographer | 32 00 |
| | 17. | Hez. Bowen, salary and bills paid, Agriculture | 158 27 |
| | | National Express Co., four boxes, books, Education | 52 80 |
| | | American Express Co., 204 packages, Dairy | 245 24 |
| | 19. | Harriet L. Husted, salary account, Forestry | 40 00 |
| | | Jno. W. Sanborn, salary account and bills, Indian | 501 93 |
| | | B. McGiveny, labor, State Building | 112 50 |
| | 20. | Miss C. E. Dennis, subsistence account | 46 25 |
| | 21. | L. M. Howland, bills paid, General and State Building | 300 00 |
| | | F. D. Shea, typewriter supplies | 3 00 |
| | | Postal Telegraph Cable Co., bill for May | 6 45 |
| | | Jno. R. Moynihan, postage stamps | 10 20 |
| | | Geo. Rumble & Co., partitions and carpenter work, three exhibits | 600 00 |
| | | J. F. Crooker, traveling expenses, etc., Education | 99 60 |
| | | Geo. T. Smith, salary account | 62 50 |
| | 22. | H. J. Rogers, salary account and bills paid, Education | 92 92 |
| | | Katharine B. Davis, expenses and bills, June 24 to July 20, Workingman's Home | 81 92 |
| | | David Mackoff, salary account, State Building | 200 00 |
| | | O. R. McKenzie, salary account, Charities | 46 66 |
| | | F. O. Armstrong, watchman, State Building | 53 25 |
| | 24. | H. Ries, traveling expenses, $77.94; salary account, $100; Scientific | 177 94 |
| | | R. B. McNaughton, salaryaccount, Transportation | 67 50 |
| | | J. M. Preston, stenographer | 16 00 |
| | 26. | A. D. Perry, salary account, Horticulture | 173 50 |
| | | J. A. Fowler, salary account, Horticulture | 45 00 |
| | | E. G. Fowler, salary account, Horticulture | 200 00 |
| | | F. M. J. Wood, salary account, Horticulture | 100 00 |

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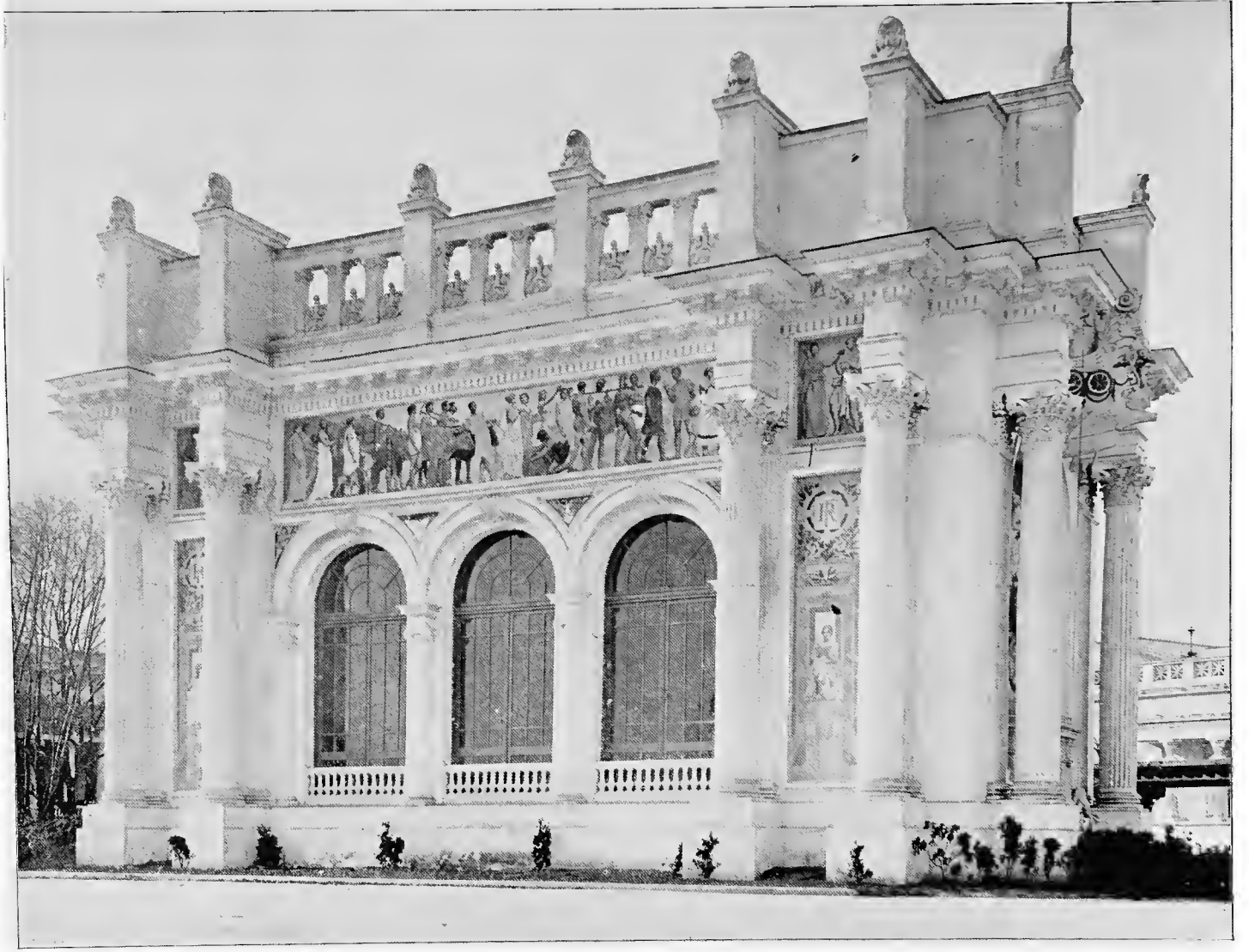
|---|---|---|---|
| July | 26. | A. R. Eastman, salary and expenses, Dairy | $235 74 |
| | 27. | Chicago Directory Co., book (1893) | 7 50 |
| | 29. | J. E. Didama, salary account, Agriculture | 100 00 |
| | | Postal Telegraph Cable Co., May and June bills | 29 62 |
| | | G. W. Allen, traveling expenses and subsistence | 288 10 |
| | | John H. Reynolds, salary account | 200 00 |
| | 31. | Thomas A. Hamilton, board account, Indian | 212 80 |
| | | A. G. Mack, salary account, State Building | 100 00 |
| | | Katharine B. Davis, salary account, Workingman's Home | 125 00 |
| Aug. | 1. | Kittie Monroe, salary account, Scientific | 65 00 |
| | | James R. Campbell, salary accouut | 65 00 |
| | | George W. Bowman, salary and traveling expenses, State Building | 96 75 |
| | | Harriet L. Husted, salary account, Forestry | 40 00 |
| | | Miss C. E. Dennis, subsistence account | 24 00 |
| | | John Foord, salary account | 250 00 |
| | | F. O. Armstrong, watchman, State Building | 30 00 |
| | 3. | H. J. Rogers, bills paid, Education | 523 82 |
| | 4. | F. H. Elter, salary account | 75 00 |
| | | Wm. Donnelly, Jr., salary account, Apiarian | 67 00 |
| | | O. R. McKenzie, salary account, Charities | 20 34 |
| | 8. | H. Bowen, salary, bills and expenses, July, Agriculture | 227 41 |
| | 10. | George Hayward, watchman, State Building | 62 00 |
| | | J. M. Preston, stenographer | 32 00 |
| | 14. | John Foord, traveling expenses | 39 21 |
| | | Harriet L. Husted, salary account, Forestry | 40 00 |
| | | F. O. Armstrong, watchman, State Building | 26 00 |
| | | P. T. Wall, salary account | 100 00 |
| | | George S. Stevens, salary account | 100 00 |
| | 15. | H. J. Rogers, salary account and bills, Education | 273 70 |
| | | Crane Elevator Co., supplies, State Building | 6 70 |
| | | G. W. Reed & Co., supplies, State Building | 7 15 |
| | 16. | John Allison, labor, State Building | 60 00 |
| | | O. R. McKenzie, salary account, Charities exhibit | 35 00 |
| | | Lena P. Bennett, bills paid, 5th district | 7 90 |
| | 21. | G. W. Allen, transportation and subsistence account | 173 27 |
| | 22. | P. V. Lyon, salary account, State Building | 40 00 |
| | | Western Union Telegraph Co., Chicago account | 53 33 |
| | | R. M. Sharra, freight, etc., Live Stock exhibit | 58 20 |
| | | Delaware & Hudson Canal Co., freight, Live Stock | 301 50 |
| | | William Watson, freight, Live Stock | 12 50 |
| | | J. M. Preston, stenographer | 32 00 |
| | | William Donnelly, Jr., salary account | 36 82 |
| | 23. | L. M. Howland, bills paid, General, $19.70; State Building, $280.30 | 300 00 |
| | | L. M. Howland, bills paid, General, $21; State Building, $279. | 300 00 |
| | | L. M. Howland, bills paid, General, $32.40; State Building, $267.60 | 300 00 |
| | | L. M. Howland, bills paid, General, $13.41; Dairy, $8.40; State Building, $278.19 | 300 00 |
| | | Footing | $26,797 55 |
| | 25. | Katharine B. Davis, expenses and bills, July 20 to August 23, Workingman's Home | 172 80 |
| | | American Florist Co., papers, Floriculture | 5 00 |
| | | E. T. Burrows & Co.. window screens, State Building | 13 60 |
| | 29. | Harriet L. Husted, salary account, Forestry | 40 00 |
| | | John H. Reynolds, expenses for Dairy | 66 91 |
| | | L. M. Howland, traveling expenses and bills paid (funeral services Chief Executive Officer McNaughton) | 397 54 |
| | | L. M. Howland, eighteen bills paid, State Building | 300 00 |
| | | L. M. Howland, twenty-five bills paid, State Building | 402 46 |
| | 31. | John H. Reynolds, salary account | 200 00 |
| | | O. R. McKenzie, salary account, Charities | 35 00 |
| | | R. B. McNaughton, salary account, Transportation | 95 00 |
| | | John Foord, salary account | 250 00 |



FRENCH PAVILION

| | | | |
|---|---|---|---|
| Aug. | 31. | R. C. Milne, salary account | $100 00 |
| | | A. G. Mack, salary, special officer, State Building | 100 00 |
| | | David Mackoff, salary account, State Building | 150 00 |
| | | Geo. T. Smith, salary account | 125 00 |
| | | Ida V. Burch, salary account | 100 00 |
| | | H. J. Rogers, salary and labor accounts, Education | 302 00 |
| | | F. H. Elter, salary account | 75 00 |
| | | J. E. Didama, salary account, Agriculture | 100 00 |
| | | Wm. Donnelly, Jr., salary account | 30 33 |
| | | Jas. R. Campbell, salary account | 40 00 |
| Sept. | 1. | Kittie Monroe, salary and bills paid, Scientific | 74 25 |
| | | Postal Telegraph Cable Co., account for July | 11 05 |
| | | Geo. D. Milligan Co., glass and painting, State Building | 6 25 |
| | | J. R. Moynihan, postage stamps | 10 26 |
| | | Katharine B. Davis, salary and bills, etc., paid, August, Workingman's Home | 204 84 |
| | 2. | W. J. Loftus, watchman, salary, State Building | 34 00 |
| | | L. E. Carpenter, salary account | 150 00 |
| | | J. M. Preston, stenographer | 32 00 |
| | | Geo. Hayward, watchman, State Building | 62 00 |
| | | Albert Dickson, labor, State Building | 44 50 |
| | | G. W. Bowman, salary account, State Building | 75 00 |
| | | N. Y. C. & H. R. R. R., freight, Live Stock | 287 70 |
| | | J. B. Dutcher, freight, Live Stock | 440 50 |
| | | Wm. Donnelly, Jr., traveling expenses | 17 52 |
| | 5. | T. F. Powers, salary account, State Building, $23.33; Charities, $90.97 | 114 30 |
| | | Hez. Bowen, salary and bills paid, Agriculture | 142 90 |
| | | L. H. Loen, music, reception, State Building | 52 50 |
| | | W. L. Sessions, traveling expenses | 40 75 |
| | | W. H. Gilbert, bills paid, Dairy | 56 30 |
| | 6. | Florence C. Ives, salary account, Women's Board | 166 66 |
| | | Margaret Tomes, salary account, Women's Board | 125 00 |
| | | Anna I. Jennyss, salary account, Women's Board | 75 00 |
| | | Mary Daly, salary account, Women's Board | 18 00 |
| | | Mary E. Alger, salary account, State Building | 200 00 |
| | | A. D. Perry, salary account, Horticulture | 175 00 |
| | | E. G. Fowler, salary account, Horticulture | 200 00 |
| | | Stella Farrand, salary account, Horticulture | 45 00 |
| | | J. Alfred Fowler, salary account, Horticulture | 45 00 |
| | | Mary Blunk, salary account | 9 00 |
| | | A. G. Foord, salary account, Scientific | 65 16 |
| | | Louis Wurzburg, awnings, platforms, etc., New York Cooking School | 700 00 |
| | | D. M. Somers, transportation and subsistence, 2d district | 85 70 |
| | | Wm. H. Rowe, Jr., transportation and subsistence, 3d district | 53 20 |
| | 7. | George Archer, hoisting statues, State Building | 80 00 |
| | 8. | A. R. Eastman, cheese for Dairy exhibit | 554 70 |
| | | R. H. Weiskotten, guard duty, State Building | 15 00 |
| | | American Express Co., Horticulture | 16 30 |
| | | Iowa State Band, music afternoon and evening, Western New York day | 150 00 |
| | 9. | Lena P. Bennett, stenographer | 21 00 |
| | | John Foord, expense account | 155 00 |
| | | Henry Stowell, traveling expenses, 7th district | 181 20 |
| | | Mrs. Leslie Pell-Clarke, expenses, etc | 55 20 |
| | 11. | Mary D. Hall, services | 10 00 |
| | | Pettibone, Wells & Co., ribbon badges, New York day | 75 00 |
| | | E. G. Fowler, bills paid, Horticulture | 9 76 |
| | | Footing | $35,040 69 |
| | | McArthur Bros., platform for cheese, Dairy | 124 00 |
| | 12. | John H. Reynolds, salary account | 100 00 |
| | | Harriet L. Husted, salary account, Forestry | 40 00 |
| | 13. | Associated Express Co., account, Agriculture | 24 05 |
| | 15. | W. L. Sessions, traveling expenses | 21 98 |

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| Sept. | 15. | James Wood, traveling expenses and bills, Live Stock | $187 72 |
| | | Howard J. Rogers, bills and expenses, Education | 256 87 |
| | | M. B. Mattice, transportation and subsistence, 3d district | 110 50 |
| | | George T. Powell, bills and expenses, Horticulture | 52 47 |
| | | O. R. McKenzie, salary account, Charities | 35 00 |
| | 16. | Caroline E. Dennis, transportation and subsistence | 55 05 |
| | | Cord Meyer, traveling expenses, etc., 2d district | 108 25 |
| | | Wm. H. Gilbert, bills paid, Dairy | 41 38 |
| | | Peter Collier, cheese, Dairy | 58 33 |
| | | Hood Sign Co., banner, Scientific | 55 00 |
| | | A. A. Campbell Co., plumbing, State Building | 57 06 |
| | | Wm. H. Rowe, Jr., traveling expenses, 3d district | 58 05 |
| | | John Allison, labor, State Building | 60 00 |
| | | Waukesha Hygeia Mineral Springs Co., water for three months, State Building | 250 00 |
| | | Jas. R. Campbell, salary account | 35 00 |
| | 19. | Western Union Telegraph Co., account for June and July | 117 96 |
| | | Postal Telegraph Cable Co., account for August | 22 07 |
| | | Anna M. Parks, traveling expenses | 35 00 |
| | | Juliet M. Preston, stenographer | 32 00 |
| | | Emily Huntington, bills paid, Children's exhibit, Women's Board | 180 95 |
| | 20. | Portable Chair Co., rental of 500 chairs | 35 00 |
| | 21. | A. J. Senn, labor, Scientific | 16 00 |
| | | R. B. McNaughton, salary account, Transportation | 70 00 |
| | 22. | T. F. Powers, salary account, Charities | 46 66 |
| | | Salter Bros., floral decorations | 30 00 |
| | 23. | Frances Todd Patterson, traveling expenses, etc. | 83 00 |
| | | R. C. Milne, salary account | 100 00 |
| | | American Express Co., August shipmeuts, Horticulture | 81 40 |
| | | James Hilton, salary and traveling expenses, Live Stock | 212 00 |
| | | F. W. Hawley, bills paid, Live Stock | 30 00 |
| | 25. | Jno. H. Reynolds, salary account | 100 00 |
| | | Harriet L. Husted, salary account, Forestry | 40 00 |
| | 26. | P. V. Lyon, salary account, State Building | 50 00 |
| | 28. | J. E. Didama, salary and bills paid, Agriculture | 115 30 |
| | | Hez. Bowen, salary and bills paid, Agriculture | 125 00 |
| | | A. G. Mack, salary, State Building | 100 00 |
| | | T. J. Whitney, traveling expenses, 4th district | 106 26 |
| | | L. M. Howland, bills paid, General, $31.70; State Building, $368.30 | 400 00 |
| | | L. M. Howland, bills paid, General, $83.53; State Building, $316.47 | 400 00 |
| | | L. M. Howland, bills paid, General, $18.51; State Building, $281.49 | 300 00 |
| | 29. | L. M. Howland, bills paid, General, $36.39; Dairy, $16.90; Horticulture, $1.31; State Building, $245.40 | 300 00 |
| | | Ida V. Burch, stenographer, salary account | 100 00 |
| | | Footing | $40,000 00 |
| | | John Foley, chief executive officer, salary account | 791 68 |
| | 30. | H. J. Rogers, salary account and bills, Education | 307 25 |
| | | James R. Campbell, salary account | 30 00 |
| | | J. M. Preston, stenographer | 32 00 |
| | | Geo. W. Bowman, salary account, State Building | 77 50 |
| | | L. E. Carpenter, salary account | 150 00 |
| | | David Mackoff, salary account, State Building | 150 00 |
| | | T. W. Loftus, salary account, State Building | 100 00 |
| | | Geo. B. Gifford, salary account, State Building | 25 00 |
| | | John Foord, salary account | 250 00 |
| | | O. R. McKenzie, salary account, Charities | 35 00 |
| Oct. | 2. | Brooks & Clark, water supply, Pasteur filter, State Building | 150 00 |
| | | Mrs. S. H. Murray, pictures, flowers for bees, etc., Apiarian | 16 75 |
| | | Helen A. Davis, bills paid, etc., September, Workingman's Home | 143 70 |
| | | Kittie Monroe, salary account, Scientific | 65 00 |

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| Oct. | 2. | Florence C. Ives, salary account, Women's Board | $166 66 |
| | | Anna I. Jennyss, salary account, Women's Board | 75 00 |
| | | Margaret Tomes, salary account, Women's Board | 125 00 |
| | | Mary Blunk, salary account, Women's Board | 18 00 |
| | | Mary Daly, salary account, Woman's Board | 20 00 |
| | | Geo. Hayward, watchman, State Building | 60 00 |
| | | W. L. Loftus, watchman, State Building | 60 00 |
| | | Geo. A. Smith, salary account, Dairy | 160 00 |
| | | M. T. Morgan, salary account, Dairy | 160 00 |
| | 3. | W. I. Buchanan, superintendent Agricultural department, World's Columbian Exposition, bills for forage, feed, etc., Live Stock | 896 45 |
| | | American Express Co., packages of butter and cheese from New York State for September exhibit, Dairy | 384 27 |
| | | L. C. Baldwin & Co., railing, posts, etc., Charities | 9 60 |
| | 4. | George A. Fuller Co., plumbing bill, State Building | 6 77 |
| | | Andrew G. Foord, salary account, Scientific | 85 00 |
| | 5. | Stella Farrand, salary account, Horticulture | 45 00 |
| | | E. G. Fowler, salary account, Horticulture | 200 00 |
| | | A. D. Perry, salary account, Horticulture | 175 00 |
| | | Mrs. Leslie Pell-Clarke, expenses and bills paid | 60 45 |
| | | American Express Co., transportation, Agriculture | 327 30 |
| | | American Express Co., transportation, Horticulture | 72 15 |
| | 7. | Portable Chair Concession, rental of chairs | 15 00 |
| | | R. M. Sharra, freight on stock, Live Stock | 58 90 |
| | | J. B. Dutcher, freight on stock, Live Stock | 482 74 |
| | 9. | A. D. Cronk & Co., use of car, Live Stock | 24 50 |
| | | E. W. Davis, freight paid, Live Stock | 39 10 |
| | | J. B. Dutcher, agent, freight paid, Live Stock | 45 44 |
| | 10. | William Wilson, freights, Live Stock | 54 50 |
| | | George B. Gifford, electrician, salary, State Building | 25 00 |
| | 11. | W. L. Sessions, traveling expenses | 44 95 |
| | | Harriet L. Husted, salary account, Forestry | 40 00 |
| | | John H. Reynolds, traveling expenses | 71 25 |
| | 12. | Western Union Telegraph Co., July and August | 45 62 |
| | | G. T. Powell, traveling expenses and bills, Horticulture | 81 80 |
| | | Mary A. Bradley, salary, Horticulture | 10 50 |
| | | A. D. Perry, bills paid, Horticulture | 5 10 |
| | | J. H. Wood, services, Horticulture | 22 00 |
| | | W. T. Ransom, traveling expenses, etc., 8th district | 101 36 |
| | | New York Insulated Wire Co., wiring, State Building | 70 21 |
| | | E. G. Fowler, bills paid, Horticulture | 22 95 |
| | | H. J. Rogers, storage on boxes, Education | 124 55 |
| | | J. B. Dutcher, agent, freights, Live Stock | 51 56 |
| | | Edward White, freights, Live Stock | 32 75 |
| | 13. | O. R. McKenzie, salary account, Charities | 40 00 |
| | | Emily Huntington, bills paid, Children's Building, Women's Board | 219 22 |
| | 14. | John H. Reynolds, salary account | 100 00 |
| | | Footing | $47,259 53 |
| | 16. | Juliet M. Preston, stenographer | 32 00 |
| | | H. T. Dana, agent, freights, Live Stock | 33 50 |
| | | Edw. White, freights, etc., Live Stock | 37 00 |
| | | H. J. Rogers, bills paid, nine vouchers, Education | 253 97 |
| | | Mary E. Alger, salary account, State Building | 300 00 |
| | | John Allison, labor, State Building | 60 00 |
| | | L. M. Howland, traveling expenses and subsistence account | 251 35 |
| | | Geo. B. Carpenter & Co., awnings, State Building | 6 75 |
| | | David Mackoff, salary account, State Building | 75 00 |
| | | W. L. Sessions, traveling expenses | 35 60 |
| | 17. | R. C. Milne, salary account | 50 00 |
| | | G. A. Larsen, plumbing bill, State Building | 150 80 |
| | | L. M. Howland, bills paid, Transportation, $2; Horticulture, $11.30; Dairy, $18.73; General, $21.92; State Building, $246.05 | 300 00 |

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|---|---|---|---|
| Oct. | 17. | L. M. Howland, bills paid, General, $30.80; State Building, $369.20 | $400 00 |
| | | L. M. Howland, bills paid, General, $21.02; State Building, $278.98 | 300 00 |
| | 18. | L. M. Howland, bills paid, General, $53.95; State Building, $246.05 | 300 00 |
| | 19. | F. W. Hawley, bills paid, Live Stock | 45 00 |
| | | Mary H. Barrell, salary account | 100 00 |
| | | Jno. R. Moynihan, postage stamps | 9 50 |
| | 20. | Wm. H. McElroy, traveling expenses, October, 1892 | 50 25 |
| | | Jas. R. Campbell, salary account | 30 00 |
| | | A. D. Cronk & Co., freight, use car, Live Stock | 60 00 |
| | | The Wells & Newton Co., plumbing and awning repairs, State Building | 20 51 |
| | 21. | Harriet L. Husted, salary account, Forestry | 40 00 |
| | | Helen A. Davis, bills and expenses, Workingman's Home | 84 58 |
| | | T. F. Powers, salary account, Charities | 80 00 |
| | | E. V. W. Rossiter, treasurer, freights, New York Central and Hudson River railroad, Live Stock | 43 20 |
| | 23. | P. V. Lyon, salary account, State Building | 50 00 |
| | | John Foord, expense account | 160 00 |
| | | Miss C. E. Dennis, expense account | 56 79 |
| | | Western Union Telegraph Co., account for August | 20 69 |
| | | B. McGiveny, salary account, three months, State Building | 225 00 |
| | | F. H. Elter, traveling expenses | 20 40 |
| | 25. | Jno. H. Reynolds, salary account | 100 00 |
| | | O. R. McKenzie, salary account, Charities | 40 00 |
| | 26. | American Express Co., freights, Dairy, $560.46; Agriculture, $69.70 | 576 16 |
| | 27. | Paul E. Lepoids, electric goods, State Building | 75 00 |
| | | P. T. Wall, salary account | 200 00 |
| | | Kittie Monroe, salary account | 65 00 |
| | | J. G. Steiger, labor, Dairy | 30 00 |
| | | R. C. Milne, salary account | 50 00 |
| | | Jas. F. Craig, salary account | 100 00 |
| | | J. E. Didama, salary account, Wool department, Agriculture | 60 25 |
| | | Jas. W. Tappin, 1st district, traveling expenses, etc | 78 65 |
| | | Geo. B. Gifford, electrician, tools, etc., State Building | 85 00 |
| | | Juliet M. Preston, stenographer | 32 00 |
| | 28. | J. A. Fowler, salary account, Horticulture | 22 50 |
| | | Harriet L. Husted, salary and traveling expenses, Forestry | 70 00 |
| | | Mrs. Leslie Pell-Clarke, traveling and hotel expenses | 121 95 |
| | 30. | Geo. S. Stevens, salary account | 200 00 |
| | | C. N. Bentley, labor and expenses, State Building | 27 00 |
| | | A. G. Mack, salary account, State Building | 100 00 |
| | | Wm. Schwarzwaelder & Co., packing, freight, etc., 1st district | 48 72 |
| | 31. | G. W. Bowman, salary and expenses, State Building | 104 25 |
| | | H. J. Rogers, salary and nine bills paid, Education | 332 78 |
| | | Frances T. Patterson, subsistence account | 32 00 |
| | | Stella Farrand, salary account, Horticulture | 46 50 |
| | | Mary A. Bradley, salary account, Horticulture | 46 50 |
| | | Margaret Tomes, salary account, Women's Board | 125 00 |
| | | Florence C. Ives, salary account, Women's Board | 166 66 |
| | | Anna I. Jennyss, salary account, Women's Board | 75 00 |
| | | Mary Blunk, salary account, Women's Board | 18 00 |
| | | Mary Daly, salary account, Women's Board | 20 00 |
| | | John Foord, salary account | 250 00 |
| | | A. G. Mack, traveling expenses, State Building | 30 17 |
| | | L. E. Carpenter, salary account | 150 00 |
| | | W. L. Sessions, traveling expenses | 61 32 |
| Nov. | 1. | T. W. Loftus, salary account, State Building | 100 00 |
| | | Jas. R. Campbell, salary account | 35 00 |
| | | Jno. H. Reynolds, traveling expenses | 55 44 |
| | | Helen A. Davis, bills paid, etc., Workingman's Home | 103 26 |
| | | H. Bowen, salary and bills paid, Agriculture | 161 95 |

BRAZILIAN GOVERNMENT BUILDING

| | | | |
|---|---|---|---|
| Nov. | 1. | J. E. Didama, salary, Agriculture | $120 00 |
| | | J. M. Thompson, boxing, packing, etc | 12 00 |
| | | P. V. Lyon, salary account, State Building | 20 00 |
| | | Geo. Hayward, salary account, State Building | 75 00 |
| | 2. | World's Columbian Exposition, storage boxes, Scientific | 45 33 |
| | 3. | John Foley, salary account | 416 67 |
| | | C. R. Schraps, subsistence account, $204.80, General; and subsistence account, $970.40, State Building | 1,175 20 |
| | 4. | World's Columbian Exposition, storage of boxes, Charities | 11 86 |
| | | A. G. Foord, salary account, Scientific | 85 00 |
| | | Juliet M. Preston, stenographer | 16 00 |
| | | Mrs. J. R. Moynihan, assistant postmaster, salary account, State Building | 200 00 |
| | | John R. Moynihan, salary account and traveling expenses, State Building | 284 08 |
| | | Florence C. Ives, bills paid, etc., Women's Board | 86 09 |
| | | Emily Huntington, salary account and bills paid, Children's Building, Women's Board | 466 47 |
| | | Mrs. Leslie Pell-Clarke, traveling expenses, etc | 44 70 |
| | | G. W. Allen, hotel and traveling account | 321 41 |
| | | A. D. Perry, salary and traveling account, Horticulture | 238 37 |
| | | E. G. Fowler, salary and expenses, Horticulture | 273 00 |
| | 6. | C. E. Randall, labor, Viticulture and Horticulture | 78 75 |
| | | W. J. Loftus, salary, State Building | 60 00 |
| | | John Foord, subsistence account and expenses | 142 00 |
| | 8. | James Wood, traveling expenses and bills, Agriculture | 112 95 |
| | | G. S. Stevens, twenty-nine bills paid, various exhibits | 300 00 |
| | 10. | T. F. Powers, salary account, Charities | 40 00 |
| | 11. | H. J. Rogers, salary account and bills, Education | 111 87 |
| | | Florence C. Ives, bills and expenses paid, Women's Board | 82 42 |
| | 13. | O. R. McKenzie, salary account, Charities | 40 00 |
| | | George S. Stevens, twenty bills paid, miscellaneous exhibits | 150 00 |
| | 14. | George S. Stevens, four bills paid, miscellaneous exhibits | 53 32 |
| | | Footing | $60,000 00 |
| | 15. | W. I. Buchanan, chief Department Agriculture, forage, etc., Live Stock exhibit | 455 50 |
| | | John H. Reynolds, salary account | 100 00 |
| | | Ida V. Burch, salary account | 34 00 |
| | | E. S. Munson, services and expenses soliciting exhibits, Dairy exhibit | 54 37 |
| | | American Express Co., express on fruit, Horticulture | 87 90 |
| | | Postal Telegraph Cable Co. | 19 06 |
| | | Knapp Bros., freight, etc., Live Stock | 54 72 |
| | | L. F. Doolittle, freights, etc., Live Stock | 81 90 |
| | | Jas. Seeley, freights, etc., Live Stock | 40 73 |
| | | Freeman & Button, freights, etc., Live Stock | 37 04 |
| | | Van Dresser Bros., freights, etc., Live Stock | 65 00 |
| | | Geo. Lough, freights, etc., Live Stock | 44 92 |
| | | Thos. N. Curry, freights, etc., Live Stock | 53 00 |
| | | E. W. Davis, freights, etc., Live Stock | 33 18 |
| | | J. H. Earll, freights, etc., Live Stock | 87 84 |
| | 16. | H. J. Rogers, salary account and bills, Education | 426 81 |
| | | P. T. Wall, traveling expenses | 26 50 |
| | 18. | P. T. Wall, salary account | 100 00 |
| | | Chas. H. Peck, traveling expenses and bills paid, Scientific | 66 60 |
| | | Geo. B. Gifford, salary account and traveling expenses, State Building | 134 50 |
| | | Jas. J. Doulan, salary account and bills, Floriculture | 348 09 |
| | | Garden City Awning and Tent Co., repairs, etc., Cooking School | 60 00 |
| | | W. B. Conkey Co., guide books | 9 55 |
| | | The Wells & Newton Co., plumbing account, State Building | 5 50 |
| | | A. C. McClurg & Co., stationery | 8 50 |
| | | Scrantom, Wetmore & Co., stationery | 58 65 |

| | | | |
|---|---|---|---|
| Nov. | 18. | Heath & Milligan Manufacturing Co., floor polish, State Building | $2 40 |
| | | Wells, Fargo & Co., October expressage, Dairy | 20 47 |
| | 20. | H. J. Rogers, freight charges, etc., Education | 25 07 |
| | | W. H. Holcomb, World's Columbian Exposition, carting, etc., various exhibits | 51 58 |
| | | R. Bosserman, World's Columbian Exposition, storage, etc., various exhibits | 15 25 |
| | | World's Columbian Exposition, carting, plumbing, water supply, etc., various exhibits | 211 92 |
| | | Western Union Telegraph Co., October, various exhibits | 28 88 |
| | | D. Mackoff, salary account and traveling expenses, State Building | 104 25 |
| | | Kittie Monroe, traveling expenses, Scientific | 30 25 |
| | 22. | H. J. Rogers, salary account, bills, Education | 190 99 |
| | | O. R. McKenzie, salary and expenses, Charities | 36 14 |
| | 23. | T. F. Powers, salary and expenses, Charities | 62 32 |
| | 24. | Freeman & Button, freight, Live Stock | 10 00 |
| | | A. H. Cooley, freight, Live Stock | 38 00 |
| | | Jas. E. Hazard, freight, Poultry | 10 45 |
| | | C. E. Howell, freight, Poultry | 4 10 |
| | | Ira L. Otis, freight, Live Stock | 18 30 |
| | | J. F. Knox, freight, Poultry | 10 00 |
| | | D. F. Wilber, freight, etc., Live Stock | 25 50 |
| | | J. A. Spraker, freight, etc., Poultry | 4 15 |
| | | G. Howard Davison, freight account, Live Stock | 96 00 |
| | 25. | Byrne & Ryan, plumbing, Cooking School | 206 66 |
| | | John H. Reynolds, salary account | 100 00 |
| | 27. | A. G. Foord, salary and traveling expenses, Scientific | 97 10 |
| | 28. | James R. Campbell, salary and traveling expenses | 59 33 |
| | | Geo. B. Gifford, salary and traveling expenses, State Building | 132 98 |
| | | Geo. Hayward, salary and traveling account, State Building | 75 80 |
| | 29. | John Foley, salary account | 416 67 |
| | | Geo. S. Stevens, salary account | 200 00 |
| | | L. E. Carpenter, salary account and traveling expenses | 186 79 |
| | | J. H. Kintz, livery account | 148 00 |
| | | E. G. Ferguson, carpenter, State Building and General | 195 20 |
| | | J. R. Moynihan, salary and traveling expenses | 143 91 |
| | | Mary E. Alger, salary account, State Building | 300 00 |
| | | T. W. Loftus, salary account, State Building | 100 00 |
| | | J. F. Craig, salary account and traveling expenses | 146 75 |
| | | W. J. Loftus, salary account, State Building | 60 00 |
| | | B. McGiveny, salary, three months, etc., State Building | 186 50 |
| | | R. C. Milne, salary and traveling expenses | 126 25 |
| | | Chicago Wholesale Picture Co., frames | 29 00 |
| | | G. W. Allen, bills paid, four months' account, board and traveling expenses | 515 15 |
| Dec. | 11. | G. Warren Heath, freight, etc., Poultry | 5 20 |
| | | F. W. Hawley, freight, etc., Live Stock | 91 00 |
| | | B. J. Hurlbut, freight, etc., Live Stock | 124 33 |
| | | John Foord, salary account | 250 00 |
| | 18. | L. F. Doolittle, freight, etc., Live Stock | 49 90 |
| | 19. | Geo. L. Cutter, insurance pictures, Fine Arts | 250 00 |
| | 22. | E. G. Ferguson, carpenter, various exhibits | 122 20 |
| | | A. C. Johnson, labor, Forestry | 20 00 |
| | | Mark S. Cook, labor, Forestry | 21 33 |
| | | W. L. Sessions, traveling expenses | 30 57 |
| | | L. M. Howland, transportation and subsistence, bills paid, etc | 262 63 |
| | | John H. Reynolds, freight and labor bills paid, various exhibits | 100 00 |
| | | John H. Reynolds, freight and labor bills paid, various exhibits | 200 00 |
| | | Geo. S. Stevens, forty-nine freight and labor bills, various exhibits | 553 41 |
| 1894. | | | |
| Jan. | 18. | Burton Stock Car Co., rent two cars, Live Stock | 81 65 |
| | | E. W. Crumb, freight bills on stock, Live Stock | 48 00 |

| | | |
|---|---|---|
| Jan. 18. | Metcalf Brothers, freight bills on stock, Live Stock | $106 64 |
| | G. W. Allen, transportation and subsistence expenses | 85 80 |
| | G. S. Stevens, salary account and nine bills paid, General and Horticulture | 146 59 |
| | John H. Reynolds, traveling expenses, freight and labor paid. | 100 00 |
| | John H. Reynolds, traveling expenses, freight and labor paid. | 100 00 |
| Feb. 15. | John H. Reynolds, salary account | 100 00 |
| March 21. | John H. Reynolds, traveling expenses and freight bills paid. | 200 00 |
| 20. | Geo. A. Stevens, bills paid | 34 78 |
| | | $70,000 00 |

## SUMMARY.

Expenditures posted to following accounts:

| | | Proceeds of sales from exhibits, per chapter 497 Laws of 1893, see p. 150. |
|---|---|---|
| Board of General Managers, including amount of $8,500 for expenses of dedication ceremonies in Chicago, October, 1892, amount of $7,500 expenses of Troop A, military escort, payments of $4,500 on State Relief Map, and all items not connected with the various district commissioners and designated exhibits | $94,127 22 | $1,221 35 |
| Board of Women Managers | 49,999 48 | 3,193 98 |
| First Judicial District Commission | 9,584 15 | 398 15 |
| Second Judicial District Commission | 5,344 95 | |
| Third Judicial District Commission | 2,045 35 | |
| Fourth Judicial District Commission | 2,837 10 | |
| Fifth Judicial District Commission | 4,006 71 | |
| Sixth Judicial District Commission | 4,361 10 | |
| Seventh Judicial District Commission | 2,958 19 | |
| Eighth Judicial District Commission | 2,948 17 | 32 00 |
| New York State Building in Chicago, construction, decoration, etc., salary and labor, contingent expenses, furniture, fixtures, etc | 200,842 98 | |
| Agriculture exhibit | 18,356 86 | 150 69 |
| Dairy exhibit | 18,897 31 | 5,167 28 |
| Horticulture exhibit | 14,363 47 | 435 35 |
| Forestry exhibit | 8,966 18 | 40 00 |
| Ethnology exhibit | 9,743 45 | 3,243 21 |
| Educational exhibit | 37,795 11 | |
| Scientific exhibit | 28,890 35 | |
| Charities exhibit | 8,457 90 | |
| Columbian Celebration in New York city | 10,000 00 | |
| Croton Water exhibit | 1,196 37 | |
| Naval Review in New York harbor | 4,319 30 | |
| Floriculture exhibit | 10,299 86 | |
| Apiarian exhibit | 6,361 45 | 1,650 94 |
| Viticulture exhibit | 4,378 88 | |
| Transportation exhibit | 7,610 92 | |
| Poultry exhibit | 157 41 | |
| Fine Arts exhibit | 16,987 07 | |
| Workingman's Model Home exhibit | 4,134 70 | 627 79 |
| Quarantine exhibit | 200 00 | |
| State Board of Health exhibit | 392 50 | |
| New York City Board of Health exhibit | 225 00 | |
| Live Stock exhibit | 6,722 56 | |
| | $597,512 05 | $16,160 74 |

# SHORT SKETCH OF THE WORLD'S COLUMBIAN EXPOSITION.

On January 24, 1890, the House of Representatives, by a majority vote, designated Chicago as the place for holding the Columbian Exposition. The final ballot stood: Chicago, 157; New York, 107; St. Louis, 25; Washington, 18. The bill, as finally amended, received the approval of President Harrison April 28, 1890. Its full title reads: "An Act to provide for celebrating the 400th anniversary of the discovery of America by Christopher Columbus, by holding an international exhibition of arts, industries, manufactures and the products of the soil, mine and sea, in the city of Chicago, in the State of Illinois."

On December 24, 1890, Chicago having complied with all the conditions nominated in the bill, President Harrison issued a proclamation inviting the nations of the world to participate in the celebration.

By provision of the act the buildings of the exposition were to be dedicated October 12, 1892, afterwards changed to October 22, and the exposition opened May 1, 1893, to continue till October 30, 1893.

Articles imported for exhibition from foreign countries were admitted free of duty, but, if afterwards sold for use in the United States, were subject to payment of duties. The United States government was not to use a sum in excess of $1,500,000 for its exhibit. A naval review in New York Harbor (see page 70) was ordered for April, 1893.

THE INTERNATIONAL EXPOSITIONS.

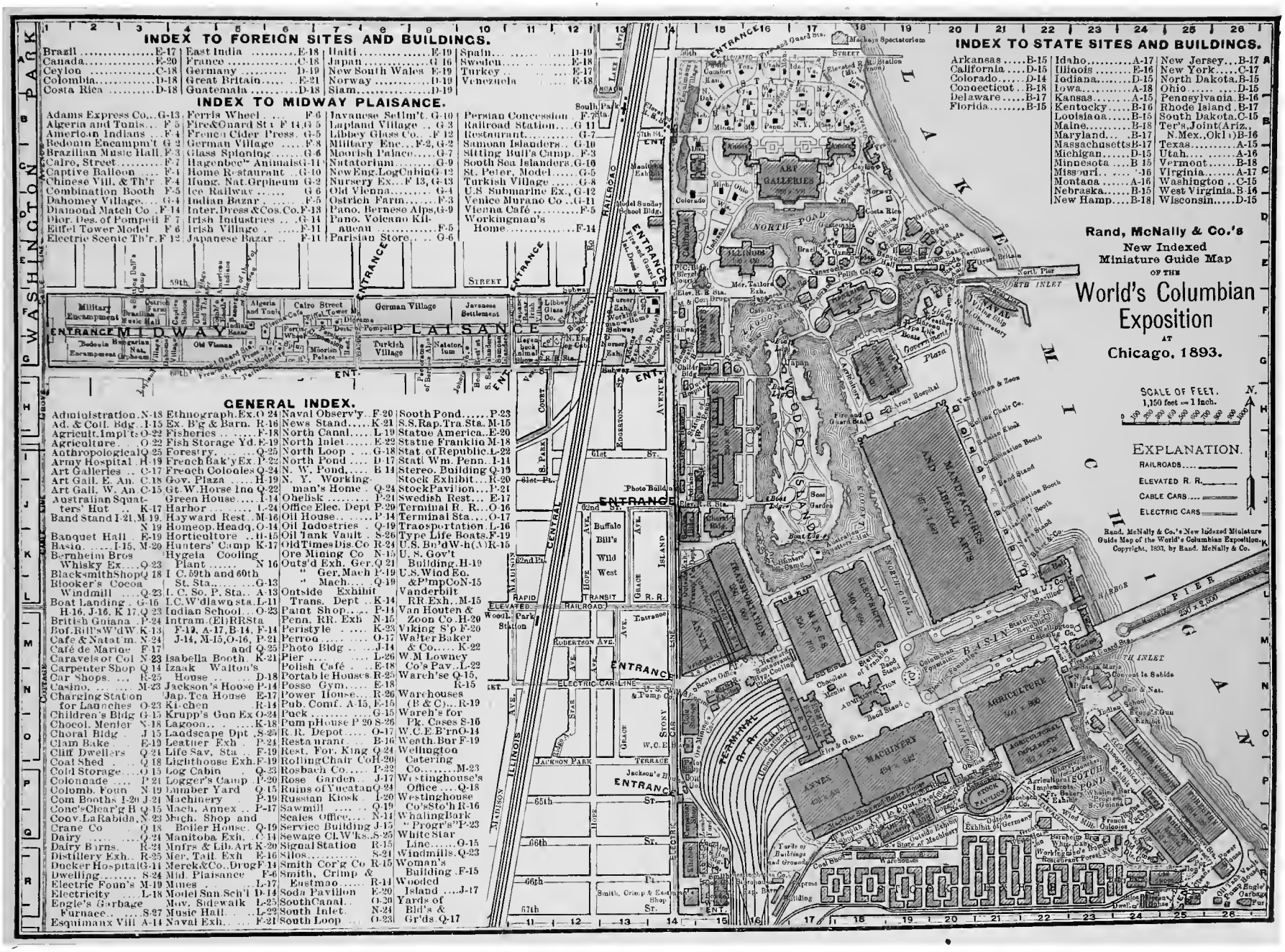
| PLACE. | Year. | No. of exhibitors. | Paid admissions. | Duration, days. | Acreage, buildings. | Acreage, grounds. |
|---|---|---|---|---|---|---|
| London | 1851 | 17,900 | 6,039,195 | 144 | 21 | |
| Paris | 1855 | 22,000 | 5,162,330 | 200 | 24.5 | |
| London | 1862 | 29,000 | 6,211,103 | 171 | 23.5 | |
| Paris | 1867 | 52,000 | 8,407,209 | 217 | 37 | 50 |
| Vienna | 1873 | 42,009 | 7,254,687 | 286 | 40 | 220 |
| Philadelphia | 1876 | 60,000 | 8,004,274 | 159 | 56 | 284.5 |
| Paris | 1878 | 52.000 | 12,623,847 | 194 | 60 | 50 |
| Paris | 1889 | 60,000 | 28,149,353 | 183 | 75.5 | 238 |
| Chicago | 1893 | *100,000 | 21,477,212 | 183 | 142.5 | 633 |

* Approximate estimate by exposition authorities.

## GOVERNMENT.

The government of the exposition was vested in two bodies: the World's Columbian Commission and the World's Columbian Exposition.

The World's Columbian Commission was composed of two commissioners from each State and Territory, including the District of Columbia, and eight commissioners-at-large. The State and territorial



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Rand, McNally & Co.'s
New Indexed
Miniature Guide Map
OF THE
# World's Columbian Exposition
AT
Chicago, 1893.

SCALE OF FEET.
1,150 feet = 1 Inch.
0 100 200 300 400 500 600 700 800 900 1000

EXPLANATION.
RAILROADS.....
ELEVATED R. R.....
CABLE CARS.....
ELECTRIC CARS.....


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commissioners were appointed by their respective Governors, the others by the President. An alternate was also appointed for each in case the original appointee could not serve. The duties of the commission were to accept such plans for site and buildings as were submitted by the World's Columbian Exposition; determine the plan and scope of the exposition; allot space to exhibitors; supervise the classification and installation of exhibits; provide for awards, and have general charge of all matters relating to exhibitors and foreign representatives. The compensation of commissioners was six dollars per day, while on business of the commission, and actual traveling expenses. The officers of the commission were: President, Thomas W. Palmer, Michigan; first vice-president, Thomas M. Waller, Connecticut; second vice-president, M. H. De Young, California; third vice-president, Davidson B. Penn, Louisiana; fourth vice-president, Gorton W. Allen, New York; fifth vice-president, Alexander B. Andrews, North Carolina; secretary, John T. Dickinson, Texas; director-general, George R. Davis, Illinois.

The World's Columbian Exposition was an Illinois corporation, organized to comply with the terms of the act of Congress authorizing the fair. Its duties were to provide grounds and buildings for the reception of exhibits; to provide for the transportation and protection of visitors; collect admissions, and in general control the financial interests of the fair. The corporation was represented by its board of directors; the officers were: President, Harlow N. Higinbotham; vice-presidents, Ferdinand W. Peck and Robert A. Waller; secretary, Howard O. Edmonds; treasurer, Anthony F. Seeberger; auditor, William K. Ackerman; director of works, Daniel H. Burnham.

It was inevitable that the province of each board should seem at times to overlap the territory of the other. To remedy this, a Board of Reference and Control, composed of members of each of the principal boards, was created, and afterwards a Council of Administration, composed of two members from each board. This arrangement was far from satisfactory, and after the exposition was fairly under way, and it became imperative that matters of administration should be decided without delay, the Director-general was made the chief executive officer of the fair, and the Director of Works subordinate.

## BOARD OF LADY MANAGERS.

The act of Congress also provided for a Board of Lady Managers, two from each State and Territory, nominated by the national commissioners thereof, one nominated by each commissioner-at-large, and nine from the city of Chicago appointed by President Harrison. Alternates were also appointed, and the compensation of the members of the board was the same as for the Board of National Commissioners. The powers and duties of the Board of Lady Managers were to manage and control the Woman's Building; to be represented on all juries of awards examining products in which female labor was a factor; and in general to look after the interests of women at the exposition.

The officers of the board were: President, Mrs. Potter Palmer, Illinois; first vice-president, Mrs. Ralph Trautmann, New York; secretary, Mrs. Susan G. Cooke, Tennessee.

### WORLD'S CONGRESS AUXILIARY.

An authorized adjunct of the exposition was the World's Congress Auxiliary, designed "to supplement the exhibit of material progress by the exposition, by a portrayal of the wonderful achievements of the new age in science, literature, education, government, jurisprudence, morals, charity, religion and other departments of human activity, as the most effective means of increasing the fraternity, progress, prosperity and peace of mankind." It was a series of congresses at which were collected the best minds in the world, and the latest theories and discoveries on all social and moral topics were fully discussed. The work performed by this international interchange of ideas was in the highest degree valuable to human progress. The officers of the World's Congress Auxiliary were: President, Charles C. Bonney; vice-president, Thomas B. Bryan; treasurer, Lyman J. Gage; secretaries, Benjamin Butterworth and C. E. Young.

The meetings of the congress were held at the Art Institute, on the lake front, Michigan avenue, foot of Adams street.

### DEPARTMENTS.

The exposition in reference to exhibits was classified by the National Commission in thirteen great departments, subdivided into 176 groups, containing 968 classes. Each department was presided over by a chief and executive staff, who, subject to the rules of the exposition, controlled all minor matters concerning exhibits and exhibitors, and were responsible to the National Commission for all acts. The departments were as follows:

A. — Agriculture, food and its accessories, agricultural machinery and appliances. Chief, W. I. Buchanan.

B. — Horticulture. Chief, J. M. Samuels; Superintendent Floriculture, John Thorpe; Superintendent Pomology, Charles Wright; Superintendent Viticulture, H. M. La Rue.

C. — Live Stock: Domestic and Wild Animals. Chief, W. I. Buchanan.

D. — Fish, Fisheries, Fish Products and Apparatus of Fishing. Chief, J. W. Collins.

E. — Mines, Mining and Metallurgy. Chief, Frederick J. V. Skiff.

F. — Machinery. Chief, L. W. Robinson.

G. — Transportation: Railways, Vessels, Vehicles. Chief, Willard A. Smith.

H. — Manufactures. Chief, James Allison.

J. — Electricity and Electrical Appliances. Chief, John P. Barrett.

K. — Fine Arts: Painting, Sculpture, Architecture, Decoration. Chief, Halsey C. Ives.

L. — Liberal Arts: Education, Engineering, Public Works, Constructive Architecture, Music and the Drama. Chief, Selim H. Peabody; Superintendent Hygiene, F. W. Brewer; Superintendent Education, Wm. O. Pratt; Superintendent of Charities and Corrections, N. S. Rosenau; Director of Music, Theodore Thomas.

M. — Ethnology, Archæology: Progress of Labor and Invention, Isolated and Collective Exhibits. Chief, F. W. Putnam.
N. — Forestry and Forest Products. Superintendent, L. M. Evans.
United States Government Exhibit. Chairman, Edwin Willits; secretary, F. T. Bickford.
Other departments connected with the executive government of the fair were:
O.— Publicity and Promotion. Chief, Moses P. Handy.
P.— Foreign Affairs. Chief, Walker Fearn.
Bureau of Awards. Executive committee, John Boyd Thacher, chairman; A. T. Britton, A. B. Andrews, W. J. Sewell, B. B. Smalley.
Bureau of Admissions and Collections. Superintendent, Horace Tucker.
Bureau of Public Comfort. Chief, W. Marsh Kasson.
Bureau of Decoration and Entertainment. Chief, F. D. Millet.
Bureau of Transportation. Chief, W. H. Holcomb.
Columbian Guard. Commandant, Col. Edmund Rice, U. S. A.
Fire Department. Chief, Edward W. Murphy.

### ARCHITECTURE.

The selection, on July 1, 1890, of Jackson Park and the large area of unimproved land south of it as the site for the exposition gave the architects and landscape gardeners a splendid opportunity for a display of creative genius. The exposition officials chose Frederick Law Olmsted, New York, landscape architect; Daniel H. Burnham, Chicago, chief architect; J. W. Root, Chicago, consulting architect, and Charles B. Atwood, New York, designer-in-chief. It was wisely determined not to intrust the designing of the buildings to any one man or firm, but to summon the most noted exponents of American architecture to aid in the work.

The location of buildings and plans of water and railways were practically those of Root, Olmsted & Codman after consultation with the leading architects. The great buildings about the Court of Honor were treated with special care, and intrusted to architects in sympathy with the same methods and principles. The buildings had a dependence on each other, not the case in other parts of the grounds, and were made to harmonize in character. The uniform style adopted by the architects was necessarily expressive of the highest civilization and free from any romantic or picturesque features. The Roman classic was the form agreed upon as best fulfilling all conditions and capable of variations according to the best Italian and Renaissance models. The architects further agreed that the module of proportion for the structure of the facades should be a bay not exceeding twenty-five feet in width nor sixty feet in height to top of main cornice. In all other respects the genius of each artist was left free to treat the subject as the space and utility seemed to warrant. The result commanded the admiration of the world. The material was temporary, which may provoke the argument that it was not true art, yet it was still the most magnificient portrayal of the possibilities of art ever witnessed.

The material which rendered possible this counterfeit of architecture is known as "staff." It was invented in France about 1876, and was first used at the Paris Exposition in 1878. Its constituents are powdered gypsum chiefly, with alumina, glycerine and dextrine. It is mixed with water without heat and cast in molds in any desired form. In molding it is mixed with coarse shreds of cloth, bagging or other fibrous material to prevent its being brittle. Staff is waterproof, takes paint readily, and its cost is one-twelfth that of marble.

It is specially a matter of pride to New York that all of the prominent structures in the vista of the Court of Honor were the work of New York architects. The only exceptions were the Machinery and Electricity buildings on the extreme southwest and northwest corners. Not only that, but the designing of the court itself and its chief features, the Peristyle, Colonnade, statue of the "Republic," Columbia and electric fountains were also done by New York artists.

The following data concerning the principal buildings are of interest:

| BUILDINGS. | Architect. | Size in feet. | Acres of floor space including galleries. | Cost. |
|---|---|---|---|---|
| Administration | Richard M. Hunt, New York | 262 x 262 | 4.5 | $436,500 |
| Agriculture | McKim, Mead & White, New York. | 500 x 800<br>*312 x 550.5 | 15<br>4 | 691,500 |
| Anthropology | Exposition officials | 415 x 255 | 3.6 | 200,000 |
| Art Palace | Charles B. Atwood, New York | 320 x 500<br>*136 x 200 (2) | 4.6<br>1.4 | 670,500 |
| Dairy | Exposition officials | 94.1 x 199.8 | .8 | 30,000 |
| Electricity | Van Brunt & Howe, Kansas City | 345 x 690 | 9.3 | 413,500 |
| Fisheries | Henry Ives Cobb, Chicago | 162.1 x 361.1<br>*135 in diameter (2) | 1.4<br>.7 | 224,750 |
| Forestry | Charles B. Atwood, New York | 208 x 528 | 2.6 | 90,250 |
| Horticulture | W. L. B. Jenney, Chicago | 250.8 x 997 8 | 8 | 287,000 |
| Leather and Shoe | Exposition officials | 150 x 625 | 4.3 | 100,000 |
| Machinery | Peabody & Stearns, Boston | 494 x 842<br>*490 x 551 | 17<br>6.2 | 1,050,750 |
| Boiler House | | 86 x 103.6 | 2.2 | 75,000 |
| Manufactures | George B. Post, New York | 787 x 1,687 | 44 | 1,600,750 |
| Mines and Mining | S. S. Beman, Chicago | 350 x 700 | 8.5 | 266,500 |
| Stock Pavilion | Exposition officials | 265 x 960 | 5.8 | 125,000 |
| Stock Sheds | Exposition officials | | 25 | 210,000 |
| Terminal | Charles B. Atwood, New York | 450 x 150 | 2.6 | 300,000 |
| Transportation | Adler & Sullivan, Chicago | 256 x 960<br>*435 x 850 | 9 4<br>8.5 | 369,000 |
| Woman's | Sophia G. Hayden, Boston | 198.8 x 398 | 3.3 | 138,000 |
| Thirty other buildings — Casino, Music Hall, Choral Hall, La Rabida, Indian School, etc | | | 16.1 | 738,000 |
| | | | 208.8 | $8,017,000 |
| U. S. Government | W. J. Edbrooke, Washington | 351 x 421 | 6.2 | 400,000 |
| Battleship, "Illinois" | | 69 x 348 | .6 | 100.000 |
| State and foreign buildings (approximate) | | | 15.2 | 2,250,000 |
| Midway Plaisance buildings (approximate) | | | 9 | 1,500,000 |
| Children's Building | | 150 x 90 | .3 | 30,000 |
| | | | 240.1 | $12,297;000 |

*Annex.

The cost of the Paris ('89) buildings was $5,826,408. No reliable figures on the cost of the Paris ('78) and Philadelphia expositions are known, as both fairs were run at a great loss and no report made.

## ART.

The most prominent works of art which adorned the grounds were:

The Columbia Fountain, in the western section of the Court of Honor, designed by Frederick McMonnies, now resident in Paris, but a native American. The design is idealistic of modern liberty. A barge, guided by Time and heralded by Fame, carries Columbia, seated on a throne. On one side are four rowers, representing the Arts, and on the other four, representing Science, Industry, Agriculture and Commerce. Preceding the barge are eight sea horses in groups of two, ridden by eight young men, representative of modern commerce. The circular base was 150 feet in diameter, and on each side were columns fifty feet high, surmounted by eagles. See page 140.

The statue of the "Republic," in the eastern section of the Court of Honor, designed by Daniel C. French, of New York. The figure is sixty-five feet high, and of wonderful symmetry. The head, neck and arms were finished in old ivory, after copies of the Jupiter and the Minerva of Phidias, while the rest of the form and drapery was of bronze or gilt. See page 344.

The magnificent examples of Grecian architecture, the Peristyle and Colonnade, which inclosed the court on the east and south, designed by Charles B. Atwood, of New York.

The Columbus Quadriga, surmounting the central arch of the Peristyle, designed by D. C. French and E. C. Potter, of New York. It represents Columbus as he appeared in the triumphal fête given on his return from his first voyage. The central figure of the great discoverer is fourteen feet high, and admirably posed. Four horses draw the chariot, led by two women. The life and spirit of the group were a great triumph to the artists, and by many it was considered the finest work on the grounds.

The statue of Columbus, in front of the Administration Building, by Mary T. Lawrence, a pupil of Augustus St. Gaudens. The figure represents Columbus with the banner of Castile and Arragon in his hand, taking possession of America. It is heroic in model and treatment.

The statue of Benjamin Franklin, in the portal of the Electricity Building. It was the work of Carl Rohl-Smith, and represents the philosopher with his kite and key tempting the lightning from the clouds.

In the southern portion of the Grand Canal, fronting the Colonnade, was a magnificent obelisk, surrounded by groups of lions, designed by M. A. Waagen. Adorning the bridges and overlooking the lagoons were the celebrated bulls, by E. C. Potter, the draught horses, by Potter and French, cowboy and pony and Indian and pony, by A. P. Proctor, and the buffaloes, bears, elks, and panthers, by Edward Kemeys and A. P. Proctor. The statue of Diana, by Augustus St. Gaudens, which adorns the dome of the Agricultural Building, was the original one designed for the Madison Square Garden, New York, and afterwards replaced by a smaller one. Hundreds of groups, typical and ornamental, adorned the exteriors and interiors of the buildings, designed by such eminent artists as Karl Bitter, Philip Martiny, Lorado Taft,

Johann Gelert, Larkin Mead, John J. Boyle and others, and in all formed a collection of models which cannot fail to have deeply impressed and educated the American public.

### NATIONAL AND INTERNATIONAL SUPPORT.

The widespread interest taken in the fair by the States of the Union and the countries of the world is strikingly evidenced by the appended tables.

The amounts appropriated by the States and Territories of the Union, for defraying cost of State buildings and exhibits, are as follows; each state had a building of its own except Alabama, Georgia, Mississippi, Nevada, North Carolina, Oregon, South Carolina, Tennessee and Alaska Territory. A joint building was erected by the territories of Arizona, New Mexico and Oklahoma.

| | | | |
|---|---|---|---|
| Alabama | $38,000 | New Hampshire | $25,000 |
| Arizona | 30,000 | New Jersey | 130,000 |
| Arkansas | 55,000 | New Mexico | 35,000 |
| California | 550,000 | New York | 600,000 |
| Colorado | 167,000 | North Carolina | 45,000 |
| Connecticut | 75,000 | North Dakota | 70,000 |
| Delaware | 20,000 | Ohio | 200,000 |
| Florida | 50,000 | Oklahoma | 17,500 |
| Georgia | 100,000 | Oregon | 60,000 |
| Idaho | 100,000 | Pennsylvania | 360,000 |
| Illinois | 800,000 | Rhode Island | 57,500 |
| Indiana | 135,000 | South Carolina | 50,000 |
| Iowa | 130,000 | South Dakota | 85,000 |
| Kansas | 165,000 | Tennessee | 25,000 |
| Kentucky | 175,000 | Texas | 40,000 |
| Louisiana | 36,000 | Utah | 50,600 |
| Maine | 57,000 | Vermont | 39,750 |
| Maryland | 60,000 | Virginia | 75,000 |
| Massachusetts | 175,000 | Washington | 100,000 |
| Michigan | 275,000 | West Virginia | 40,000 |
| Minnesota | 150,000 | Wisconsin | 212,000 |
| Mississippi | 25,000 | Wyoming | 30,000 |
| Missouri | 150,000 | | |
| Montana | 100,000 | Total | $6,060,350 |
| Nebraska | 85,000 | | |
| Nevada | 10,000 | | |

The foreign nations made the following appropriations to make and maintain exhibits:

| | | | |
|---|---|---|---|
| Argentine Republic | $100,000 | Denmark | $67,000 |
| Austria | 102,300 | Dutch Guiana | 10,000 |
| Belgium | 57,000 | Dutch West Indies | 5,000 |
| Barbados | 5,840 | Ecuador | 125,000 |
| *Brazil | 600,000 | *France | 733,000 |
| British Guiana | 25,000 | *Germany | 800,000 |
| British Honduras | 7,500 | *Great Britain | 291,000 |
| *Canada | 100,000 | Greece | 60,000 |
| Cape Colony | 50,000 | *Guatemala | 200,000 |
| *Ceylon | 65,500 | Hawaii | 40,000 |
| *Colombia | 100,000 | *Hayti | 25,000 |
| *Costa Rica | 150,000 | Honduras | 20,000 |
| Cuba | 25,000 | India | 30,000 |
| Danish West Indies | 1,200 | Jamaica | 24,300 |

* Erected government buildings for exhibits and headquarters of commissioners.

| | | | |
|---|---|---|---|
| *Japan | $630,000 | Russia | $46,320 |
| Leeward Islands | 6,000 | Salvador | 12,500 |
| Liberia | 7,000 | San Domingo | 25,000 |
| Mexico | 50,000 | *Siam | 35,000 |
| Morocco | 150,000 | *Spain | 200,000 |
| *New South Wales | 243,325 | *Sweden | 108,000 |
| Netherlands | 100,000 | Trinidad | 15,000 |
| New Zealand | 27,500 | *Turkey | 17,466 |
| Nicaragua | 31,000 | Uruguay | 24,000 |
| *Norway | 56,280 | *Venezuela | 100.000 |
| Orange Free State | 7,500 | | |
| Paraguay | 100,000 | Total | $5,951,531 |
| Peru | 140,000 | | |

* Erected government buildings for exhibits and headquarters of commissioners.

## ATTENDANCE.

While the Chicago Exposition did not, as was fondly hoped, excel all previous records in attendance, it so closely approached them, under adverse conditions, as to practically triumph over its competitors. The price of admission, double that of Paris, its closest rival, the distance to be traveled by sightseers, the high rates prevailing on many railroads till late in the season, and the comparatively small population within a radius of one hundred miles, render the figures actually recorded a marvel.

The following table gives the monthly and total attendance in comparison with Paris and Philadelphia:

| | CHICAGO. | | | PARIS, 1889. | PHILADELPHIA, 1876. |
|---|---|---|---|---|---|
| | Paid admissions. | Passes. | Total. | Paid admissions. | Paid admissions. |
| May | 1,050,037 | 481,947 | 1,531,984 | 2,610,813 | 378,980 |
| June | 2,675,113 | 902,721 | 3,577,834 | 4,338,869 | 695,666 |
| July | 2,760,263 | 1,217,239 | 3,977,502 | 4,544,196 | 636,518 |
| August | 3,515,493 | 1,172,215 | 4,687,708 | 4,977,092 | 908,684 |
| September | 4,659,871 | 1,149,071 | 5,808,942 | 5,246,704 | 2,130,931 |
| October | 6,816,435 | 1,128,995 | 7,945,430 | 4,820,869 | 2,334,530 |
| *November | ..... | ..... | ..... | 1,610,810 | 918,965 |
| Total | 21,477,212 | 6,052,188 | 27,529,400 | 28,149,353 | 8,004,274 |

* The Chicago figures do not include post-exposition attendance.

No very accurate comparison can be made between Chicago's paid admissions and Paris'. The admission fee in Paris was one franc, but before eleven A. M. and in the evening two tickets were required for admission, and on some special fête days five tickets were required. The exact number of persons who visited the Paris Exposition on the above number of paid admissions was 25,398,609. The number admitted by passes in Paris was 4,204,758, making the total admissions, paid and free, 32,354,111. In Philadelphia the free admissions were 1,906,692, making the total attendance 9,910,966. At the Chicago Fair the admission was fifty cents, and no reduction was made except during Children's Week in the month of October.

The number of free admissions recorded at all of the expositions is much greater than the actual number of passes granted, as many workmen and regular officials and employees passed in and out several times daily.

The greatest number attending in any one day at Paris was on October third, when there were 387,877 paid admissions. The highest attendance at Chicago was on October ninth, "Chicago Day," when 716,881 paid admissions were recorded.

The following were the principal attendance days of the fair:

| | | | |
|---|---|---|---|
| May 1, Opening Day | 128,935 | Oct. 9, Chicago Day | 716,881 |
| June 8, Infanta's Day | 135,281 | Oct. 10 | 309,294 |
| July 4, United States Day | 283,273 | Oct. 11 | 309,277 |
| Aug. 24, Illinois Day | 243,951 | Oct. 12 | 278,878 |
| Sept. 4, N. York Day (Monday) | 160,382 | Oct. 15 | 221,607 |
| Sept. 7, Pennsylvania Day | 203,460 | Oct. 21, Manhattan Day | 298,928 |
| Sept. 9, California Day | 231,522 | Oct. 24 | 243,178 |
| Sept. 14, Ohio Day | 198,770 | Oct. 25 | 252,618 |
| Sept. 16 | 202,376 | Oct. 27 | 250,583 |
| Sept. 23 | 215,643 | Oct. 28 | 240,732 |
| Oct. 7 | 222,176 | Oct. 30, Closing Day | 210,622 |

## FINANCE.

The following table, taken from the report of Auditor William K. Ackerman November 25, 1893, and complete to November 12, 1893, with subsequent expenses estimated, gives a concise view of the financial history of the exposition. After all expenses and possible liabilities are paid it is estimated that the shareholders will receive from ten to twenty per cent on their investment. The souvenir coins were not the success expected and sold slowly. On the other hand, the concession receipts were greater than anticipated:

| *Receipts.* | | *Expenditures.* | |
|---|---|---|---|
| Capital stock | $5,604,171 97 | Construction expenses | $18,322,622 56 |
| Chicago bonds | 5,000,000 00 | General and operating expenses | 7,127,240 32 |
| Souvenir coins | 2,448,032 28 | Preliminary organization | 90,674 97 |
| Gate receipts | 10,626,330 76 | | $25,540,537 85 |
| Concession receipts | 3,699,581 43 | | |
| Miscellaneous receipts | 686,070 49 | Outstanding debts, obligations, estimated liabilities, salaries, office expenses, etc | 748,147 00 |
| Interest | 86,981 82 | Net assets | 1,862,483 90 |
| | $28,151,168 75 | | $28,151,168 75 |

The capital stock was subscribed by residents of Chicago, and the city was bonded to the extent of $5,000,000 in aid of the enterprise; the souvenir coins, half a million half-dollars, were given to the exposition company by the United States to be sold at a premium. Those unsold were turned back into the treasury and recoined.

A more detailed account of expenditures may be gathered from the following statement:

| | | | |
|---|---|---|---|
| Architecture | $398,810 | 19 | |
| Anthropology | 217,638 | 65 | |
| Art | 801,444 | 68 | |
| Agriculture | 740,655 | 55 | |
| Bridging | 84,529 | 19 | |
| Coloring and decorating | 388,284 | 31 | |
| Concession expenses | 128,209 | 44 | |
| Ceremonies | 333,663 | 88 | |
| Dredging | 615,144 | 36 | |
| Damages | 197,146 | 82 | |
| Dairy | 110,770 | 16 | |
| Decorations | 119,134 | 81 | |
| Donations and charities | 27,996 | 17 | |
| Electrical | 1,911,857 | 04 | |
| Engineering, surveying, etc. | 218,229 | 03 | |
| Fencing | 95,631 | 45 | |
| Fire protection | 298,254 | 18 | |
| Foreign agents | 168,898 | 17 | |
| Finance | 601,230 | 85 | |
| Fisheries | 257,466 | 30 | |
| Forestry | 110,533 | 78 | |
| Furniture | 125,774 | 55 | |
| Grounds | 465,480 | 85 | |
| Gate expenses | 347,352 | 48 | |
| General expenses | 1,294,565 | 92 | |
| Horticulture and floriculture | 456,628 | 25 | |
| Insurance | 182,687 | 03 | |
| Installation | 387,950 | 81 | |
| Janitors | 378,038 | 42 | |
| Landscape gardening | 551,448 | 45 | |
| Live stock | $258,560 | 87 | |
| Manufactures and liberal arts | 1,890,198 | 65 | |
| Marine service | 58,151 | 76 | |
| Music | 600,947 | 59 | |
| Mines and mining | 327,575 | 56 | |
| Machinery | 2,786,684 | 91 | |
| Medical and surgical | 44,983 | 03 | |
| National agitation | 87,807 | 56 | |
| Police protection | 1,301,478 | 72 | |
| Piers and breakwaters | 600,449 | 11 | |
| Preliminary organization | 90,674 | 97 | |
| Public comfort | 150,404 | 23 | |
| La Rabida Convent | 25,009 | 16 | |
| Roads and sidewalks | 394,428 | 41 | |
| Railway transportation | 1,247,101 | 48 | |
| Sculpture | 866,172 | 12 | |
| Stable expenses | 110,207 | 37 | |
| Superintendence and inspection | 292,690 | 30 | |
| Special attractions | 125,760 | 75 | |
| Shoe and leather | 111,062 | 13 | |
| Transportation exhibits | 587,231 | 75 | |
| Viaducts | 39,637 | 63 | |
| World's congress auxiliary | 264,061 | 03 | |
| Woman's Building | 141,032 | 55 | |
| Water and sewage | 1,122,770 | 44 | |
| Total | $25,540,537 | 85 | |

## TRANSPORTATION.

The transportation facilities were unexcelled. The park was connected with the heart of the city, seven and one-half miles distant, by surface cars, cable and electric, elevated railroad, Illinois Central railroad, which devoted two tracks to exposition traffic alone, steamboat lines to Van Buren street, and was also within easy walking distance of the greater part of South Chicago. The total carrying capacity of the different lines was about 125,000 persons per hour. This system was tested thoroughly on Chicago Day, and the enormous crowd was handled successfully without serious accident or delay.

Within the grounds transportation was by means of the Intramural railway, an elevated electric road, and electric launches on the lagoons.

## MIDWAY PLAISANCE.

No description of the fair, however brief, would be complete without an allusion to the famous side show of the exposition, "The Midway." This strip of land, seven-eighths of a mile long and 600 feet wide, connects Jackson Park with Washington Park, and along its sides were ranged the various exhibits, attractions and novelties culled from every quarter of the globe, but not strictly admissible into the exposition grounds proper. An admission fee was charged to all exhibits of consequence. The cosmopolitan nature of the crowd which jostled up and down the thoroughfare, the strange intermingling of

languages, customs and manners, and the spectacular effect of the bits of Europe, Asia and Africa, transplanted to a western soil, formed a picture which delighted thousands. The principal features of the Plaisance were the German Village, Old Vienna, Cairo Street, Javanese Village, South Sea Islanders, Dahomey Village, Irish Village, Japanese and Algerian Bazaars. The Ferris Wheel was an engineering work of such magnitude as to warrant notice. The wheel was 250 feet in diameter, and revolved on an axle which was forty-five feet long, thirty-two inches in diameter and weighed seventy tons. The feature of the wheel was the tension spokes, which were under strain only when in use. This occurred when the spokes were below the level of the axle, as they then held up the lower semi-circle of the wheel, which, in turn, supported the upper arc, thus forming a perpetual arched bridge. The number of cars was thirty-six, each capable of holding twenty-four persons. The wheel cost $380,000, and paid for itself by September first.

A large portion of the revenue of the exposition company came from the amount paid for "concessions" by the companies and exhibits along the Plaisance.

## AWARDS.

The number of awards granted by the exposition was 23,757, which represented thirty-six per cent of the exhibitors entered for awards. This number is far below any other international exposition, Paris (1889) having granted 33,889 awards, or fifty-five per cent of the number exhibiting.

The system of awards, as devised by a joint commission of the World's Columbian Commission and World's Columbian Exposition, and approved by Congress, was a development of the "American system," first introduced at Philadelphia (1876), and excludes the "competitive idea." A standard of excellence is fixed in each group and class. All exhibits reaching this standard receive a bronze medal and also a diploma which states the specific points of excellence for which the award is granted. The diploma is signed by the individual judge making the examination and countersigned by the president of the departmental committee, or jury, which pass upon the findings reported by the individual judges. For full explanation of the system, see page 524.

## CLOSE OF THE EXPOSITION.

The exposition company had agreed to restore Jackson Park to its former condition within a stated time, or to a condition acceptable to the park commissioners. The Art Palace in the northern part of the grounds was better built than most of the structures, and will be allowed to remain as a permanent exhibition building.

The waterways, lagoons, islands and other features of the landscape gardening will also remain to attest the wondrous creation of which it was the groundwork. It was earnestly hoped that some arrangement could be found whereby the Court of Honor might be undisturbed for several years at least. The "staff" which formed the facades of the

FERRIS WHEEL.

buildings will resist the wear of the elements for a long time if kept painted, and the project was possible. The grandeur of the court whose fame had been carried to every corner of the earth, would have attracted visitors by the thousands and have been a scene of beauty and inspiration worth every trouble to preserve it. The deliberations of the exposition and park officials on the subject were cut abruptly by the spirit of vandalism which broke out in South Chicago in the winter of 1893–1894, and one after another the structures inclosing the court were destroyed by incendiary fires.

The great exposition has become history. Its record is incomparably above any that has preceded it, and it has set a standard difficult to attain by its successors. It will be known as the crowning industrial achievement of the close of the nineteenth century, and it attests not only the courage, genius and progress of the city which built it, but also of the whole American people who sustained and supported it.

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